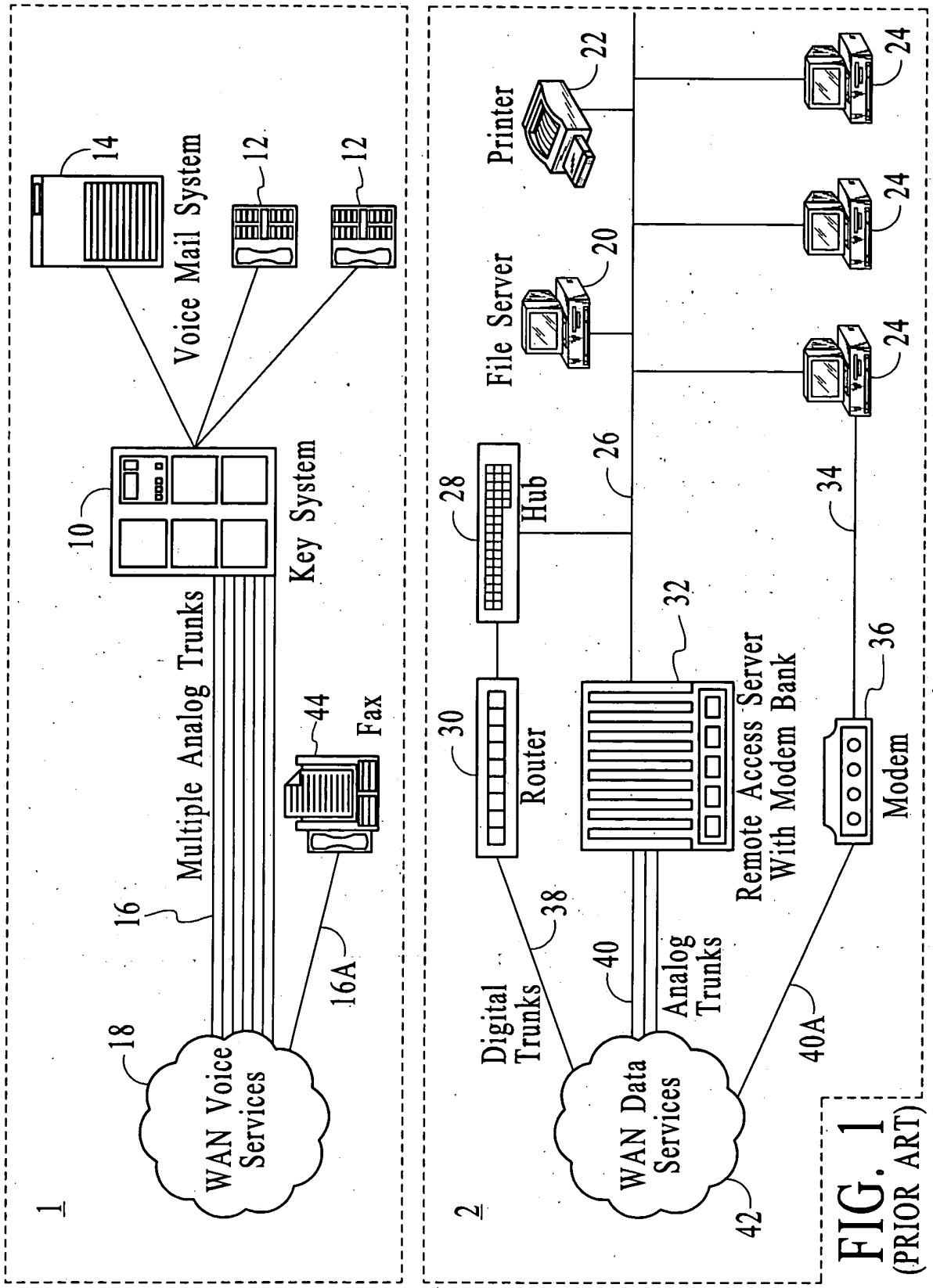


FIG. 1
(PRIOR ART)

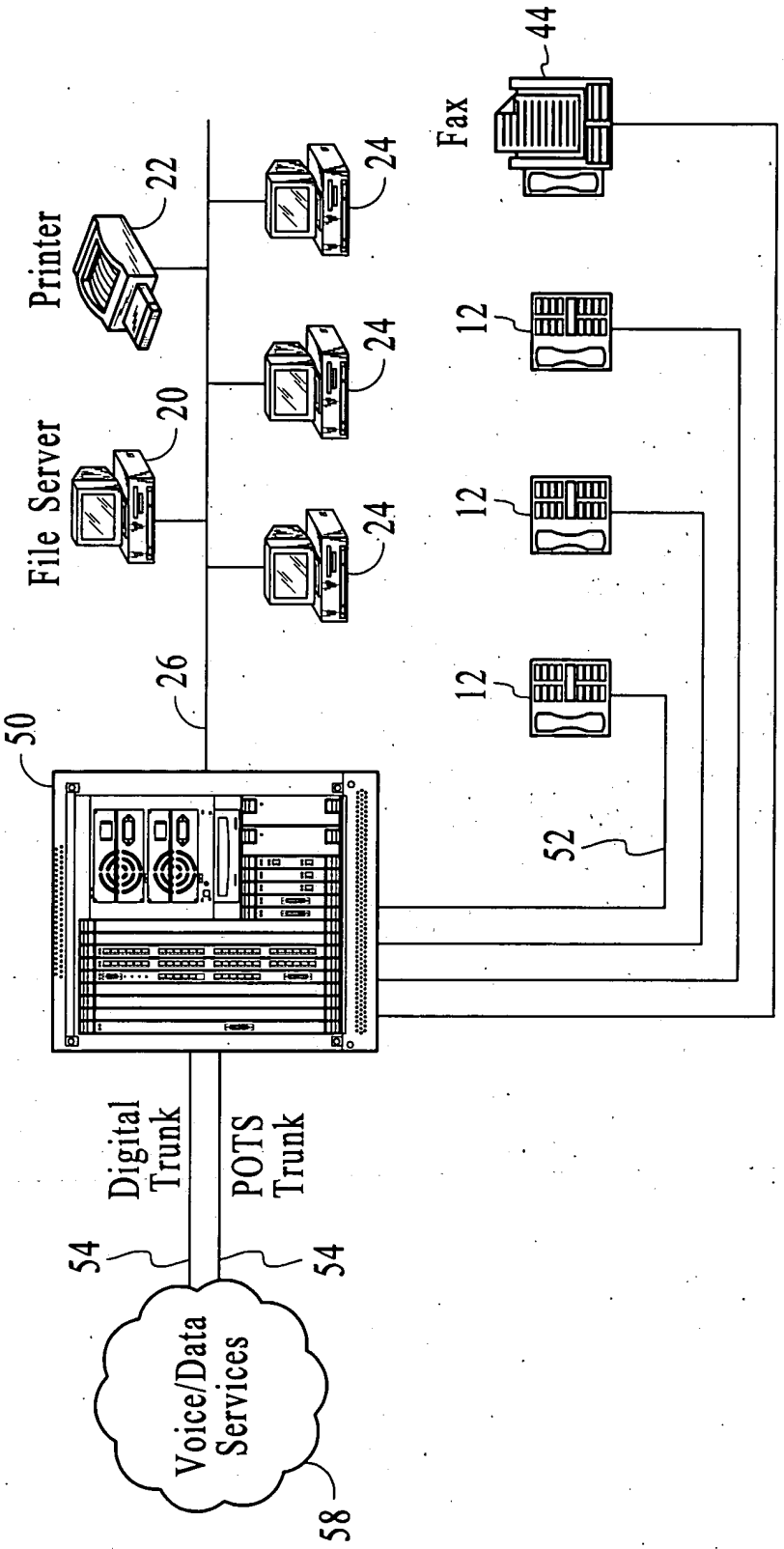
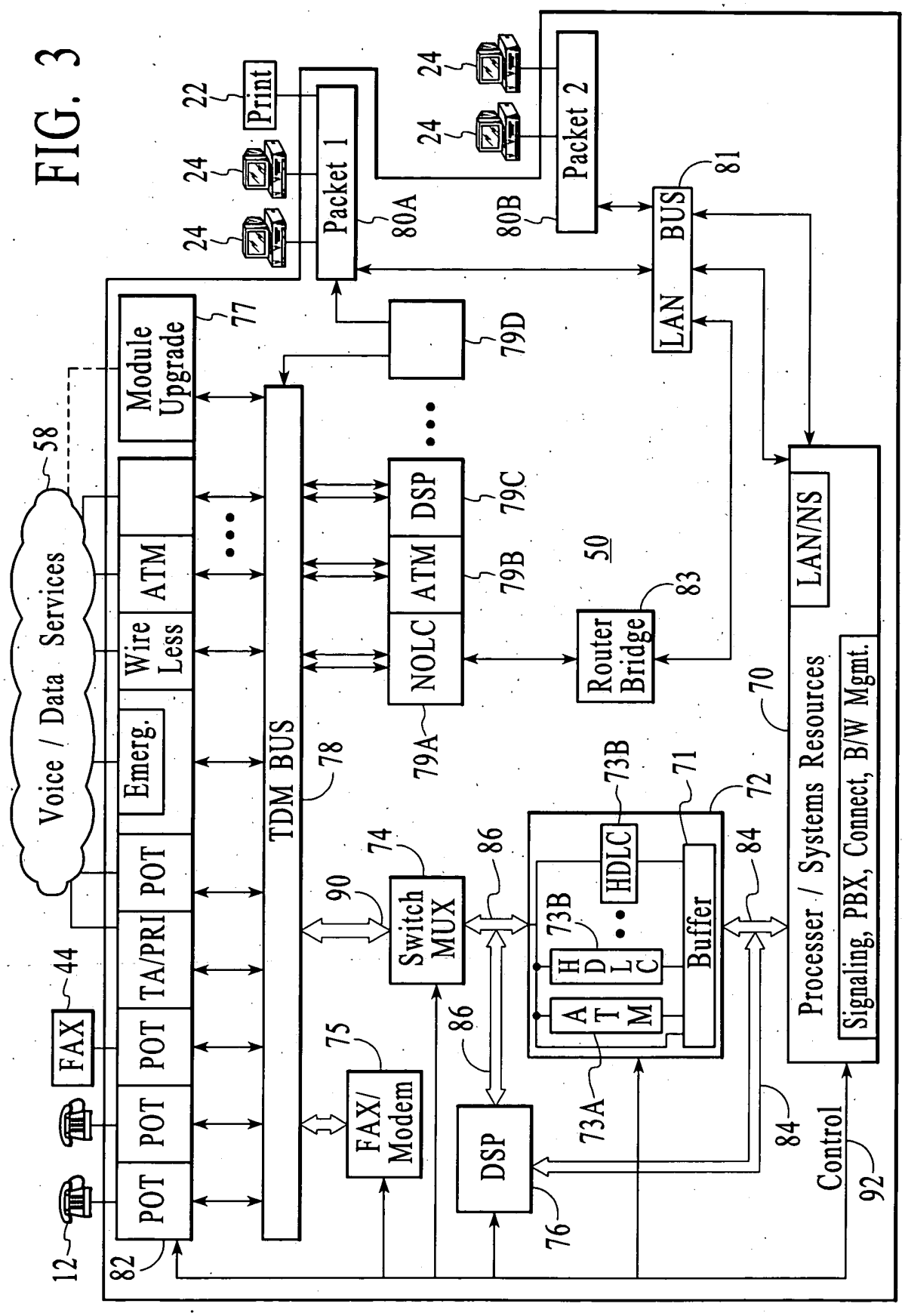

Printer
22
File Server
20
24
24
24
Fax
44
12
12
12
26
50
52
Digital Trunk
POTS Trunk
54
54
Voice/Data Services
58

FIG. 2

FIG. 3


Voice / Data Services
58
Module Upgrade
77
Emerg.
Wire Less
ATM
POT
TA/PRI
POT
POT
POT
FAX
44
12
82
TDM BUS
78
Print
22
24
24
24
Packet 1
80A
24
24
24
Packet 2
80B
81
LAN BUS
79D
DSP
ATM
NOLC
79C
79B
79A
50
Router Bridge
83
LAN/NS
70
Processer / Systems Resources
Signaling, PBX, Connect, B/W Mgmt.
Control
92
74
Switch MUX
90
86
86
FAX/ Modem
75
DSP
76
73A
73B
ATM
HDLC
HDLC
73B
Buffer
71
72
84
84

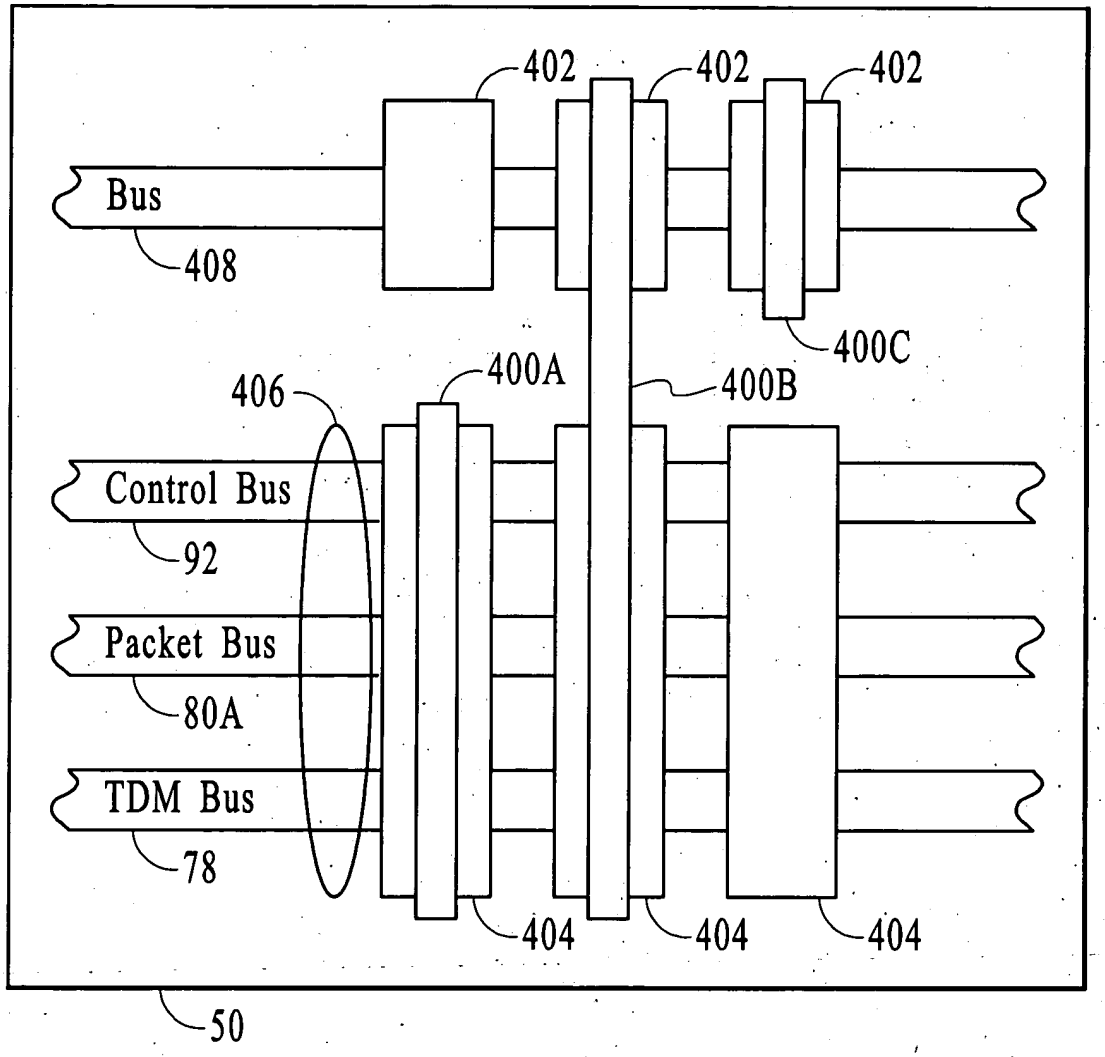

402
402
402
Bus
408
400C
406
400A
400B
Control Bus
92
Packet Bus
80A
TDM Bus
78
404
404
404
50

FIG. 3A

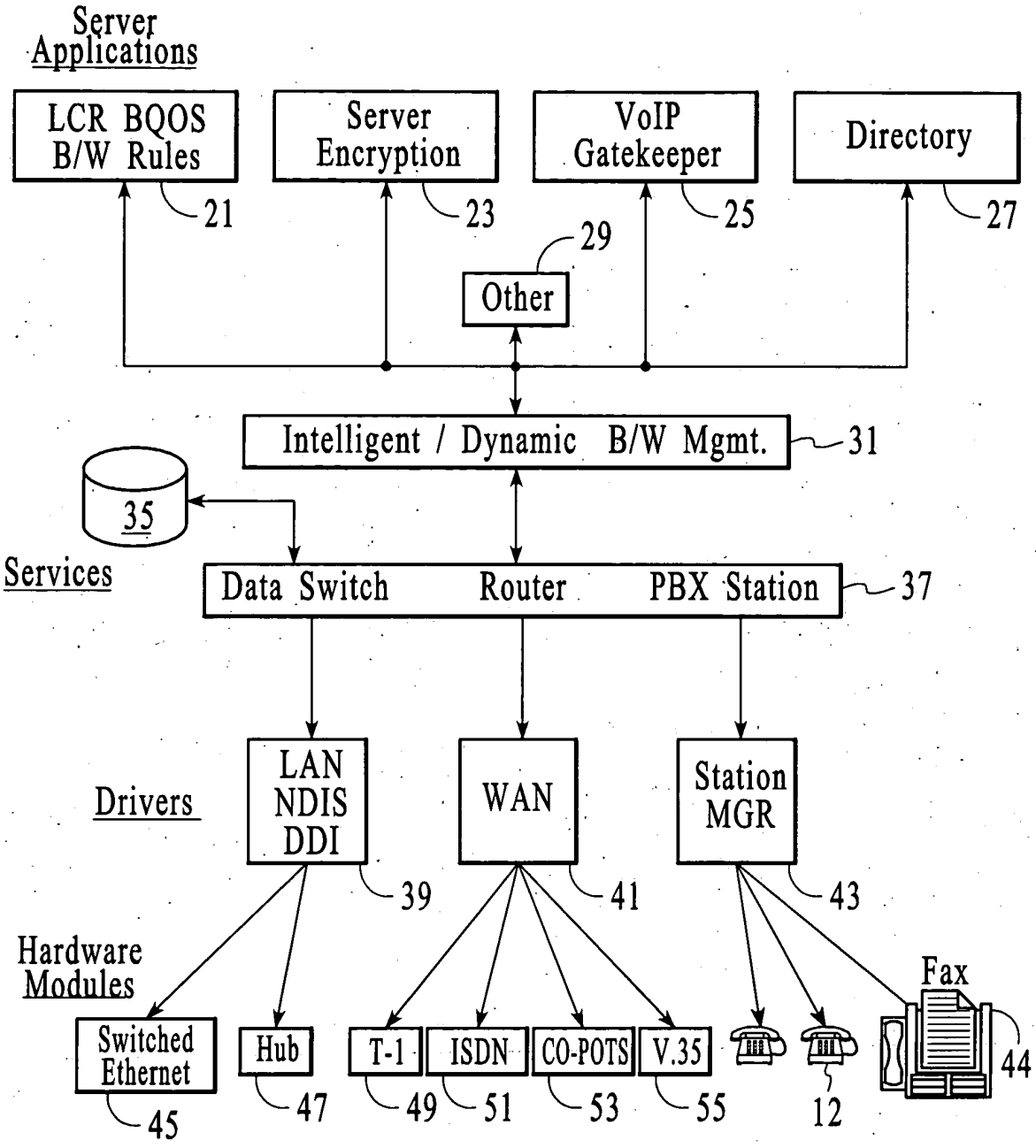

Server Applications
LCR BQOS B/W Rules
21
Server Encryption
23
VoIP Gatekeeper
25
Directory
27
29
Other
Intelligent / Dynamic B/W Mgmt.
31
35
Services
Data Switch
Router
PBX Station
37
Drivers
LAN NDIS DDI
39
WAN
41
Station MGR
43
Hardware Modules
Switched Ethernet
45
Hub
47
T-1
49
ISDN
51
CO-POTS
53
V.35
55
12
Fax
44

FIG. 4

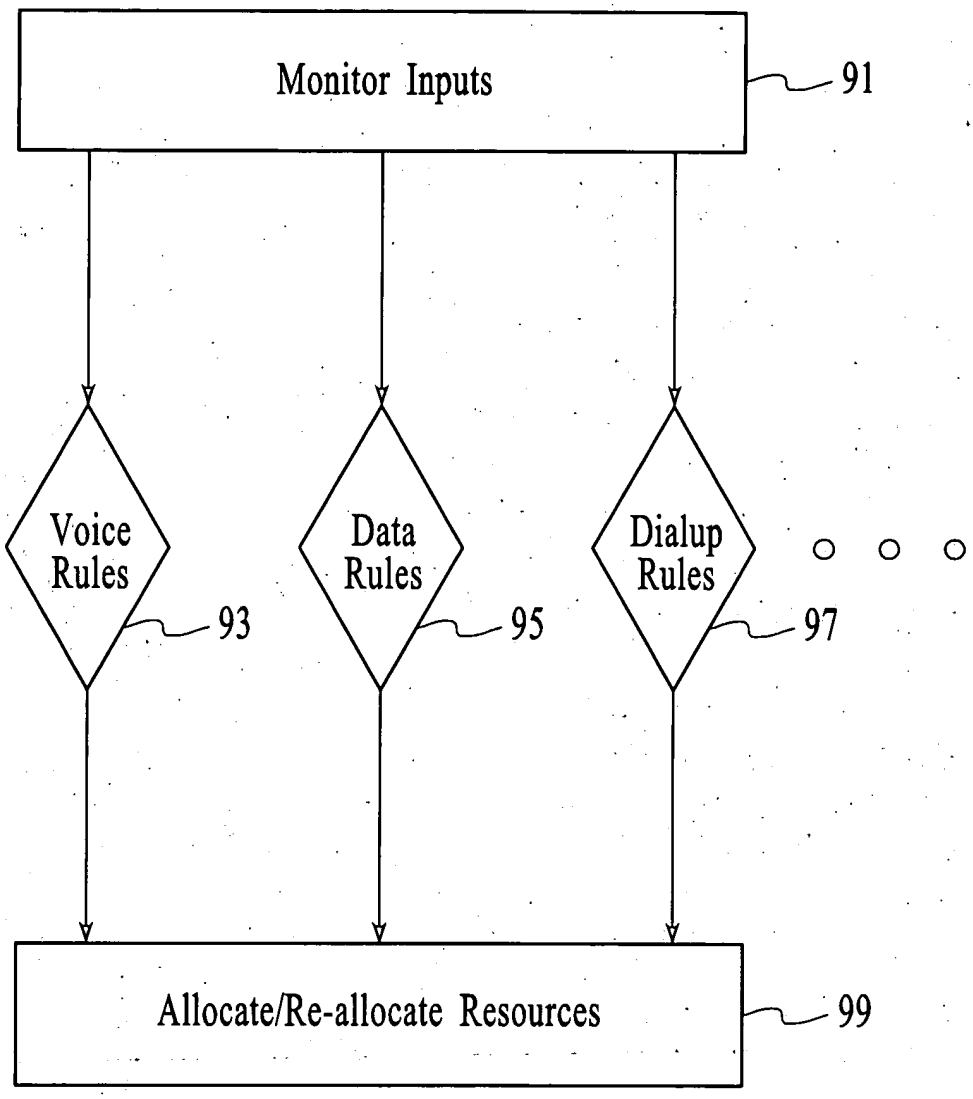

Monitor Inputs
91
Voice Rules
93
Data Rules
95
Dialup Rules
97
Allocate/Re-allocate Resources
99

FIG. 5

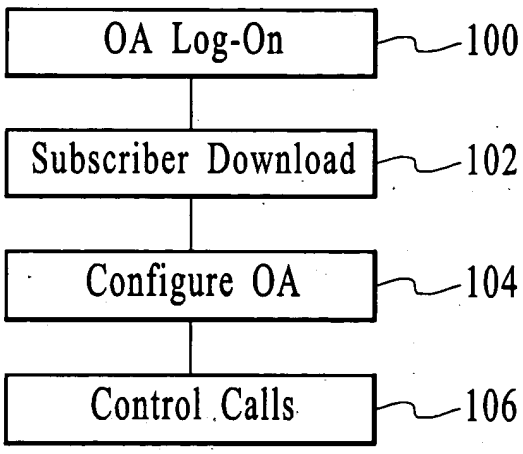

OA Log-On
100
Subscriber Download
102
Configure OA
104
Control Calls
106

FIG. 6

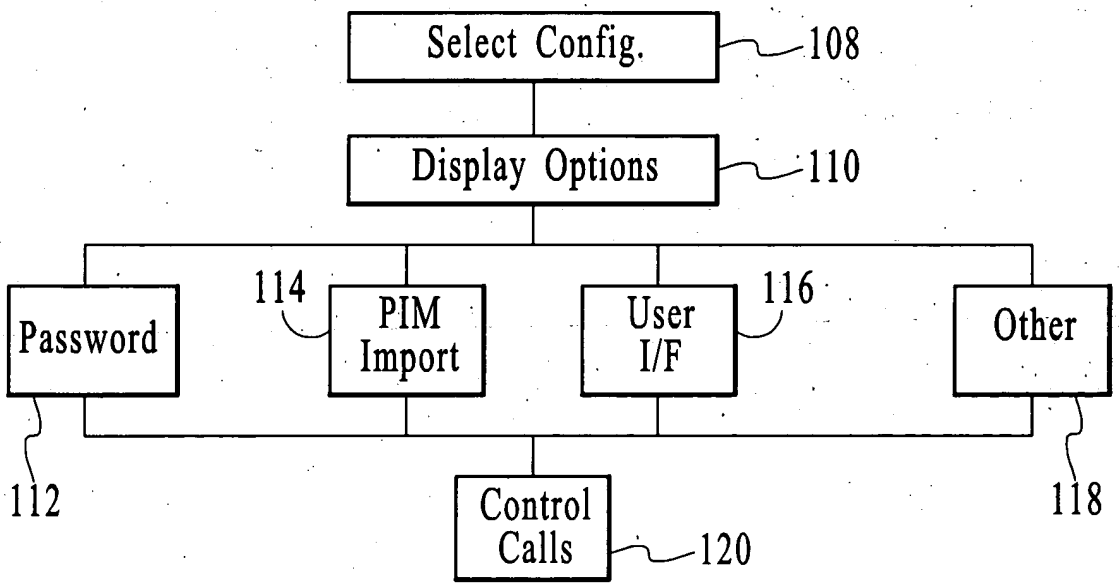

Select Config.
108
Display Options
110
Password
114
PIM Import
User I/F
116
Other
112
Control Calls
120
118

FIG. 7

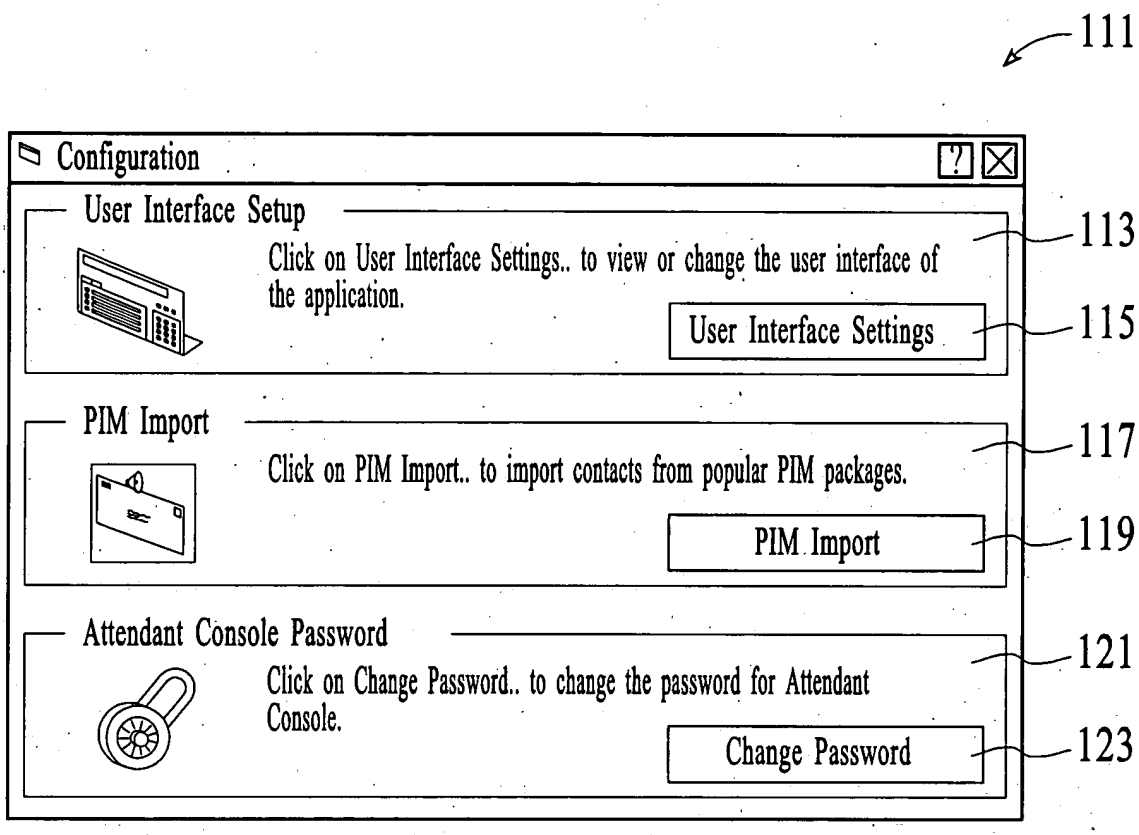

111
Configuration
User Interface Setup
Click on User Interface Settings.. to view or change the user interface of the application.
User Interface Settings
113
115
PIM Import
Click on PIM Import.. to import contacts from popular PIM packages.
PIM Import
117
119
Attendant Console Password
Click on Change Password.. to change the password for Attendant Console.
Change Password
121
123

FIG. 7A

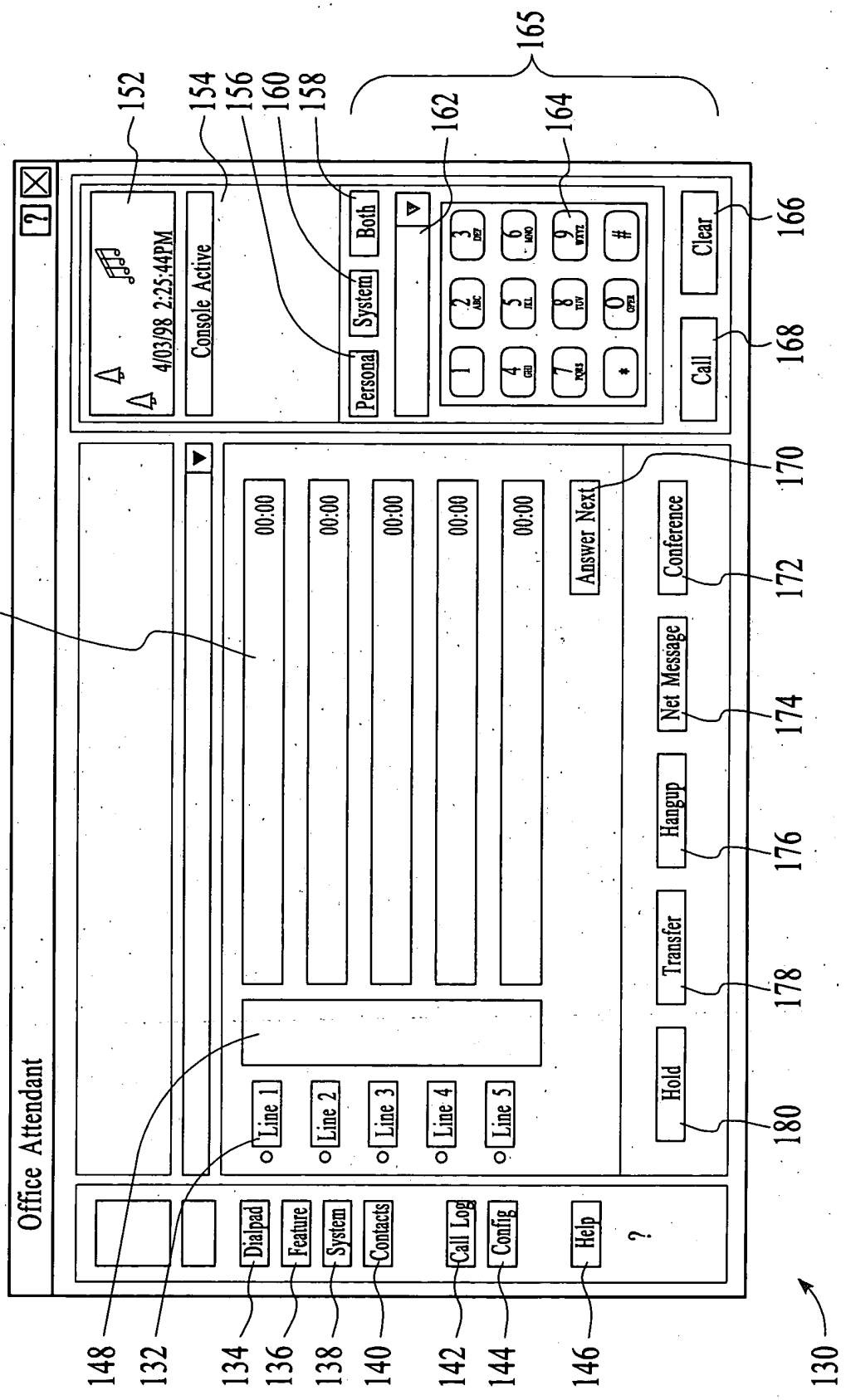

Office Attendant
4/03/98 2:25:44PM
Console Active
Personal
System
Both
Clear
Call
Answer Next
Conference
Net Message
Hangup
Transfer
Hold
Line 1
Line 2
Line 3
Line 4
Line 5
00:00
Dialpad
Feature
System
Contacts
Call Log
Config
Help
?
150
152
154
156
160
158
162
164
165
166
168
170
172
174
176
178
180
148
132
134
136
138
140
142
144
146
130

FIG. 8A

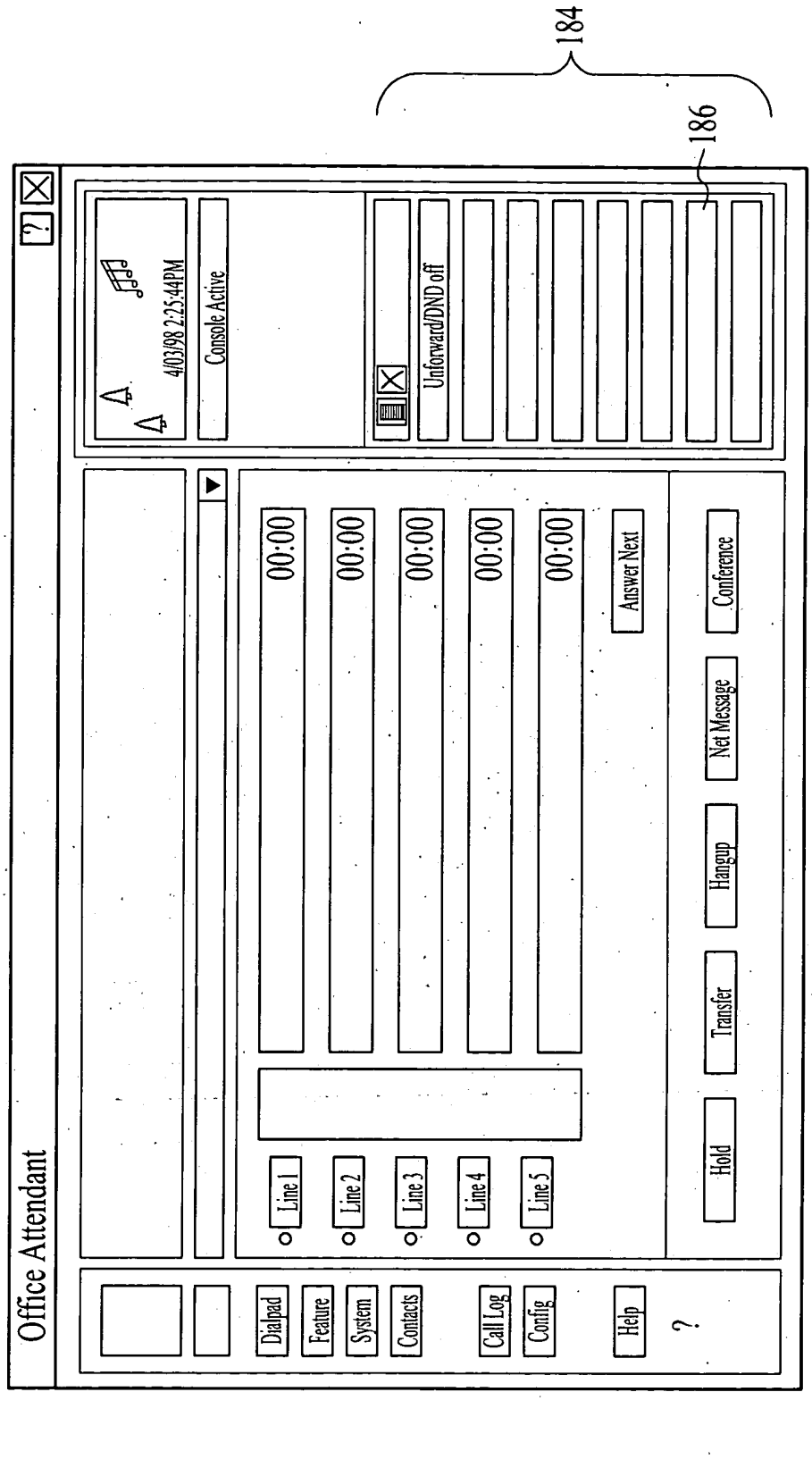

184
186
Office Attendant
4/03/98 2:25:44PM
Console Active
Unforward/DND off
Line 1
Line 2
Line 3
Line 4
Line 5
00:00
00:00
00:00
00:00
00:00
Answer Next
Dialpad
Feature
System
Contacts
Call Log
Config
Help
?
Hold
Transfer
Hangup
Net Message
Conference
182

FIG. 8B

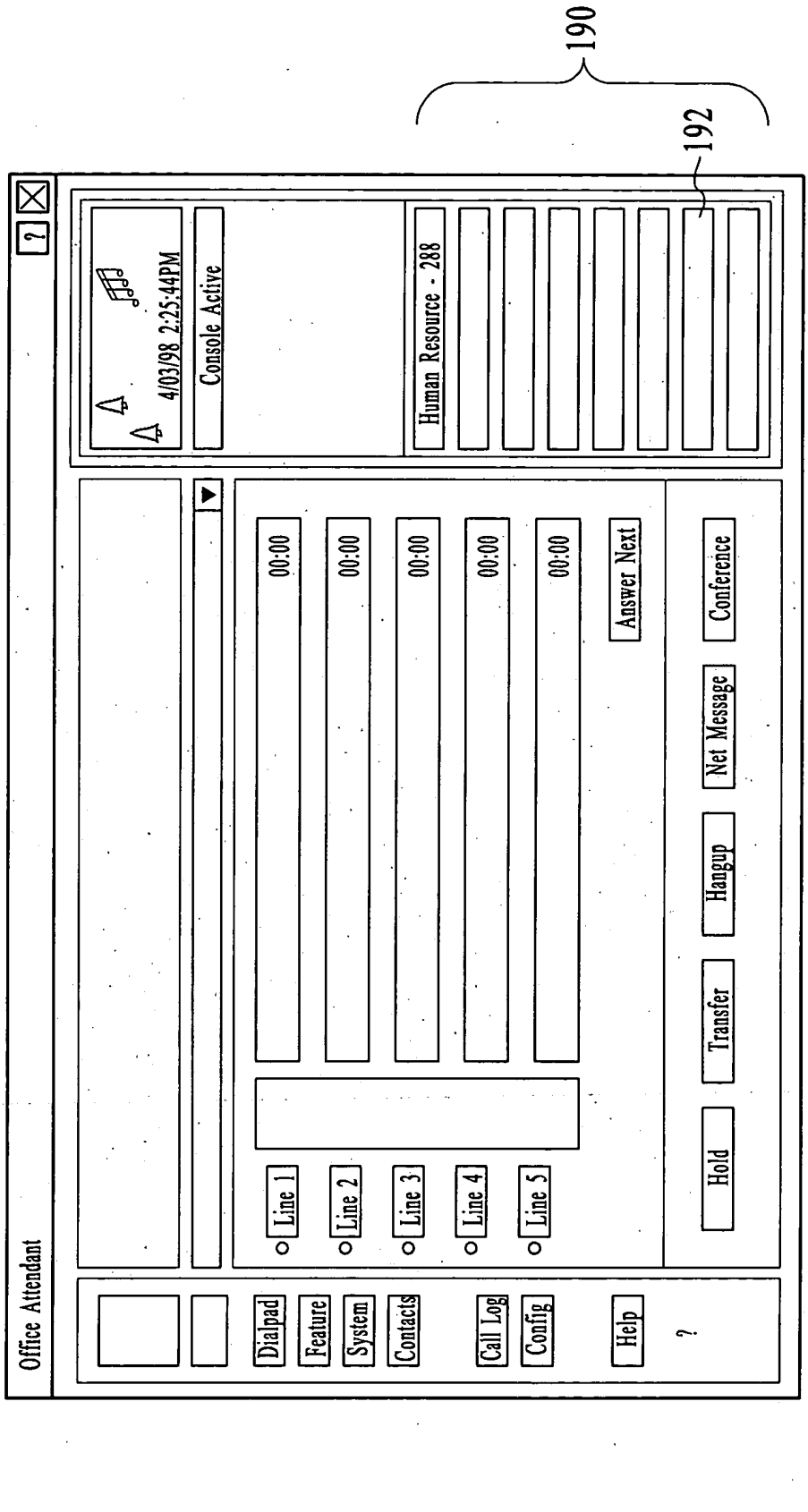

190
192
188
Office Attendant
4/03/98 2:25:44PM
Console Active
Human Resource - 288
Line 1
Line 2
Line 3
Line 4
Line 5
00:00
Answer Next
Hold
Transfer
Hangup
Net Message
Conference
Dialpad
Feature
System
Contacts
Call Log
Config
Help
?

FIG. 8C

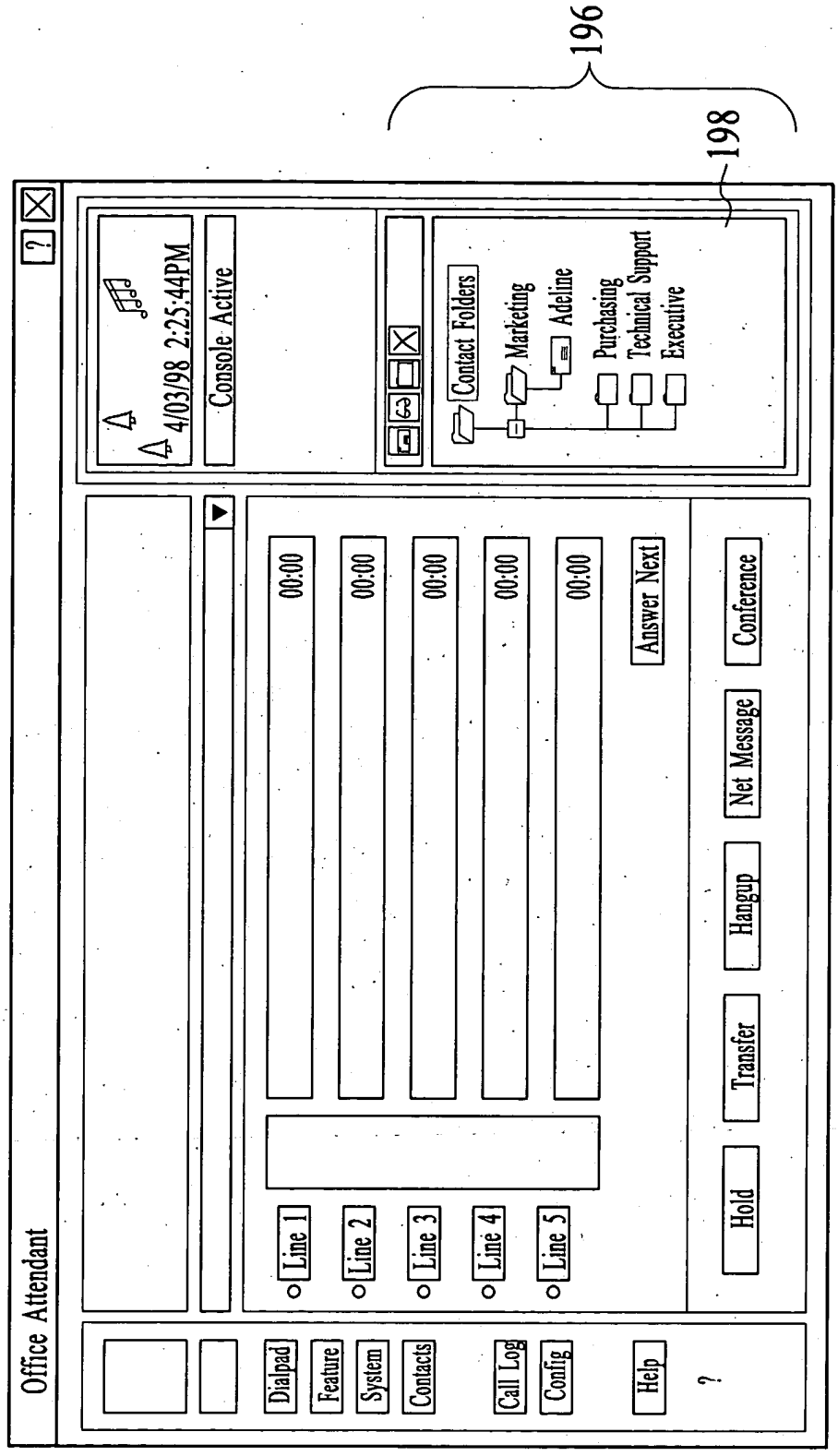

196
198
194
Office Attendant
4/03/98 2:25:44PM
Console Active
Contact Folders
Marketing
Adeline
Purchasing
Technical Support
Executive
Line 1
Line 2
Line 3
Line 4
Line 5
00:00
Answer Next
Hold
Transfer
Hangup
Net Message
Conference
Dialpad
Feature
System
Contacts
Call Log
Config
Help
?

FIG. 8D

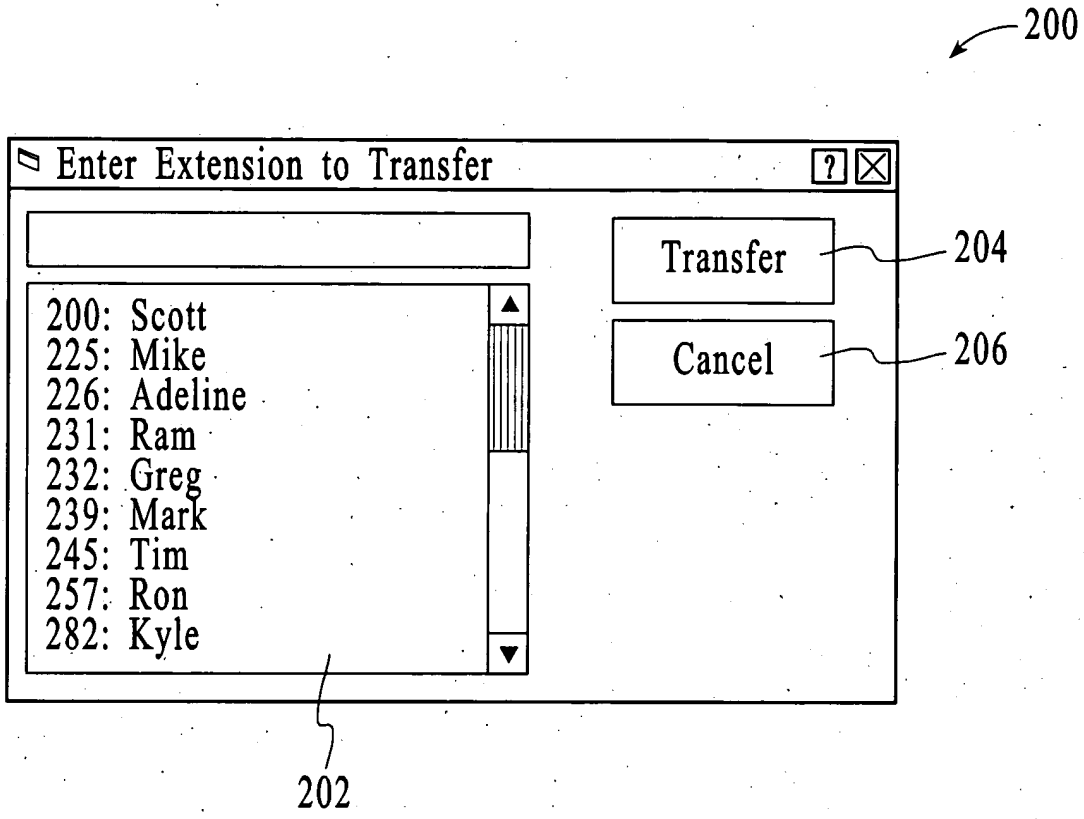

200
Enter Extension to Transfer
200: Scott
225: Mike
226: Adeline
231: Ram
232: Greg
239: Mark
245: Tim
257: Ron
282: Kyle
Transfer
204
Cancel
206
202

FIG. 9A

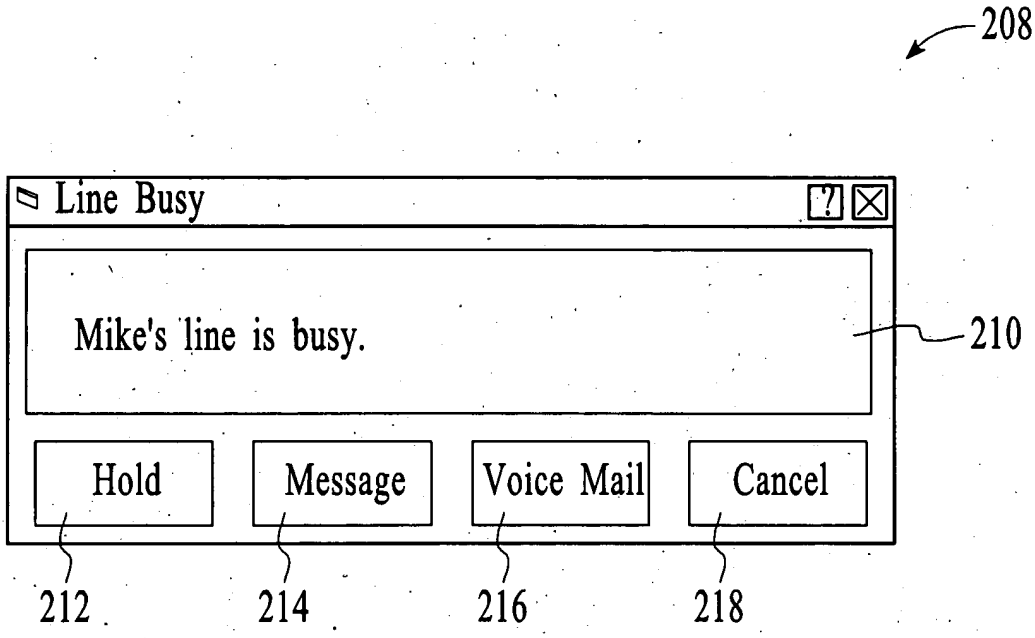

208
Line Busy
Mike's line is busy.
210
Hold
Message
Voice Mail
Cancel
212
214
216
218

FIG. 9B

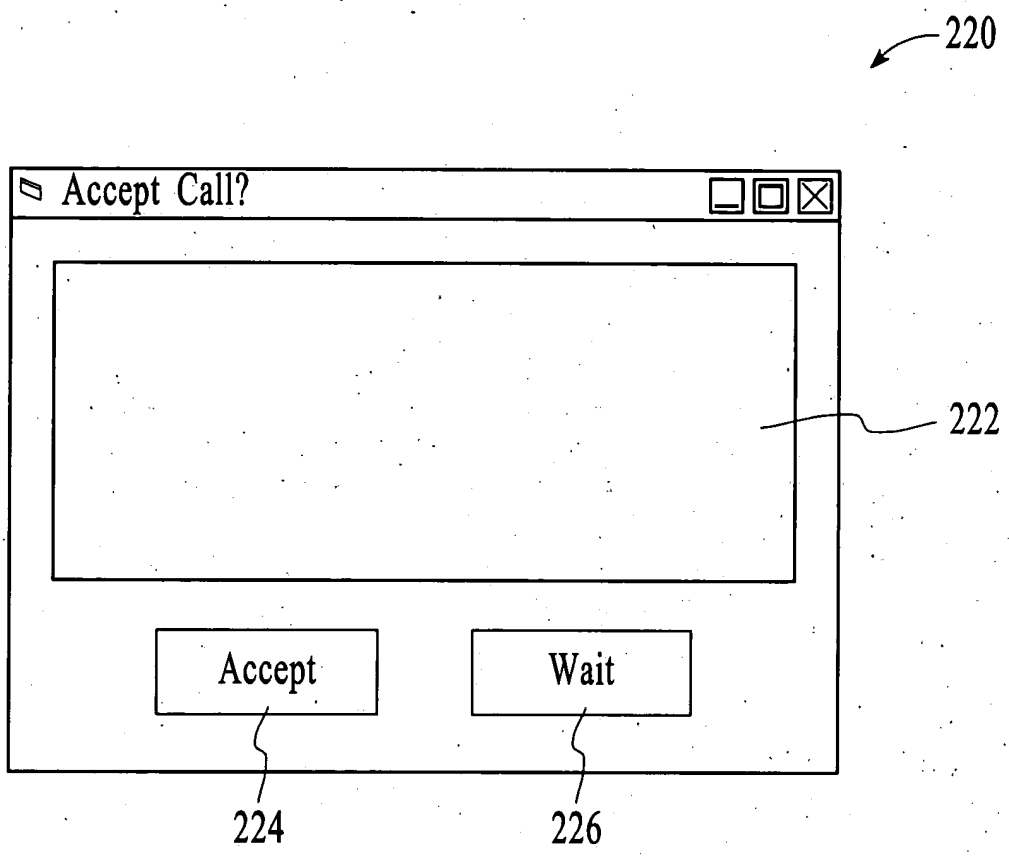


FIG. 9C

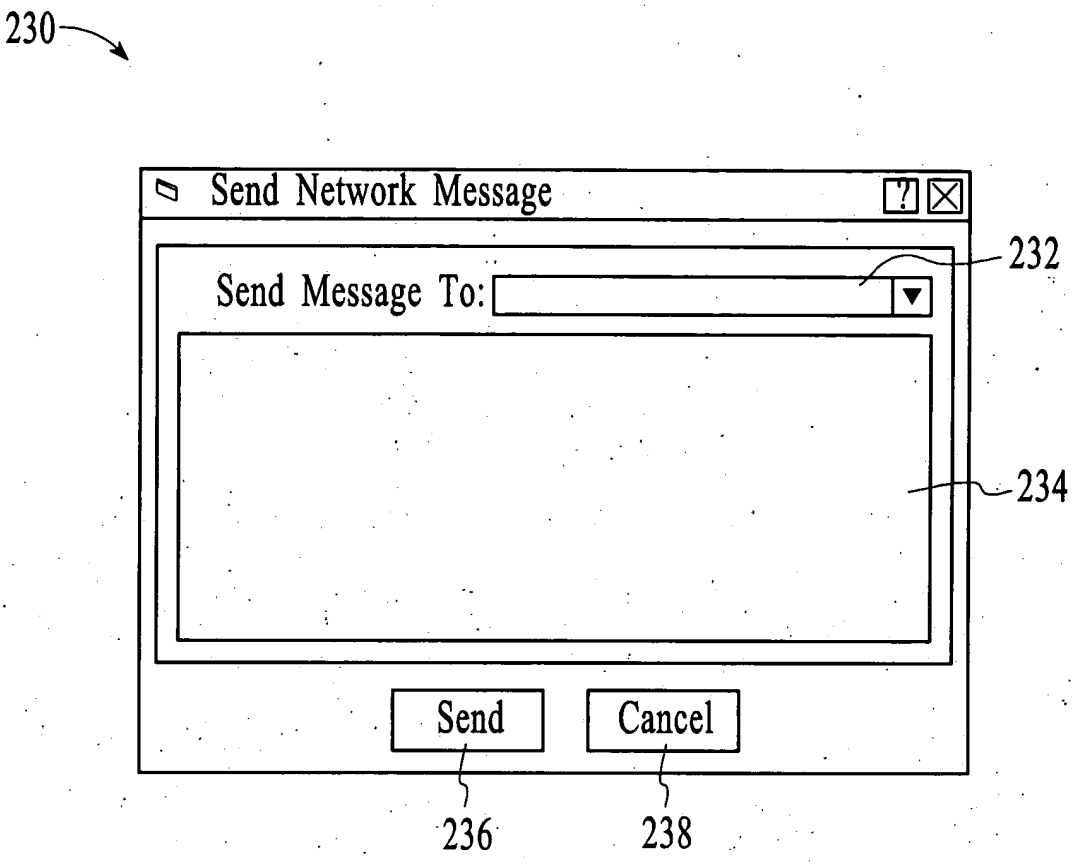

230
Send Network Message
Send Message To:
232
234
Send
Cancel
236
238

FIG. 10A

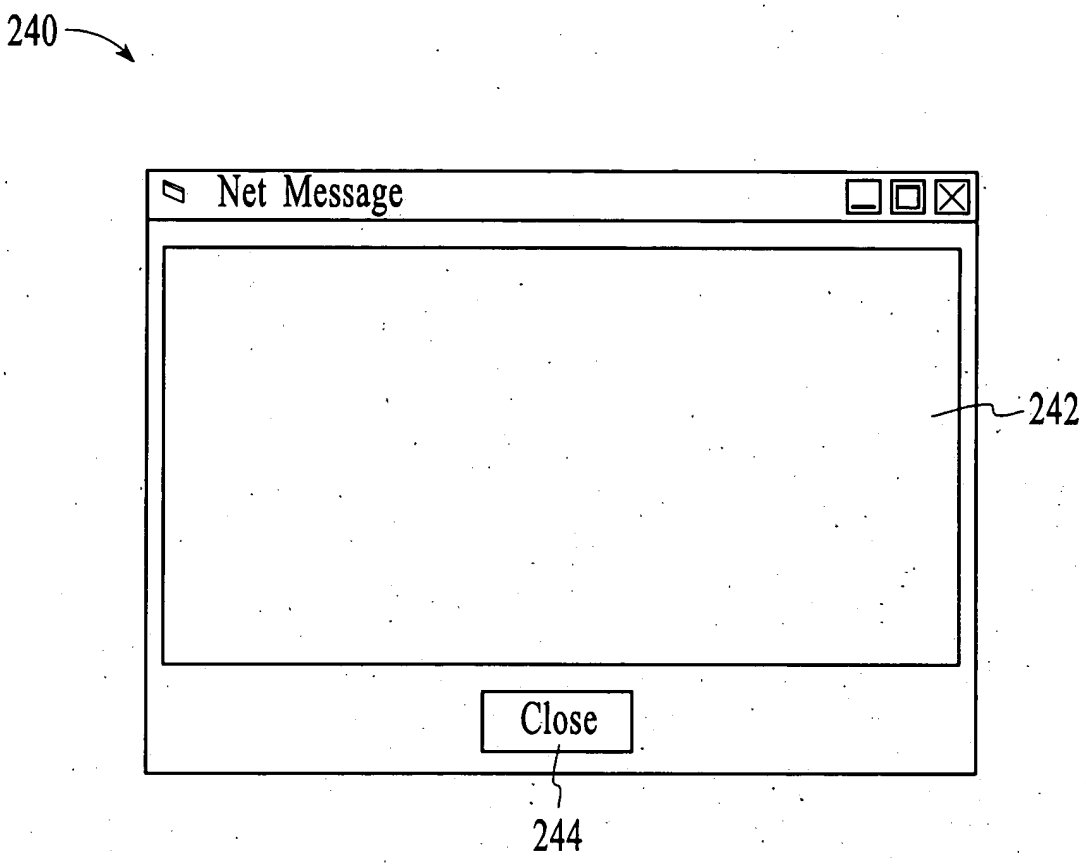


FIG. 10B

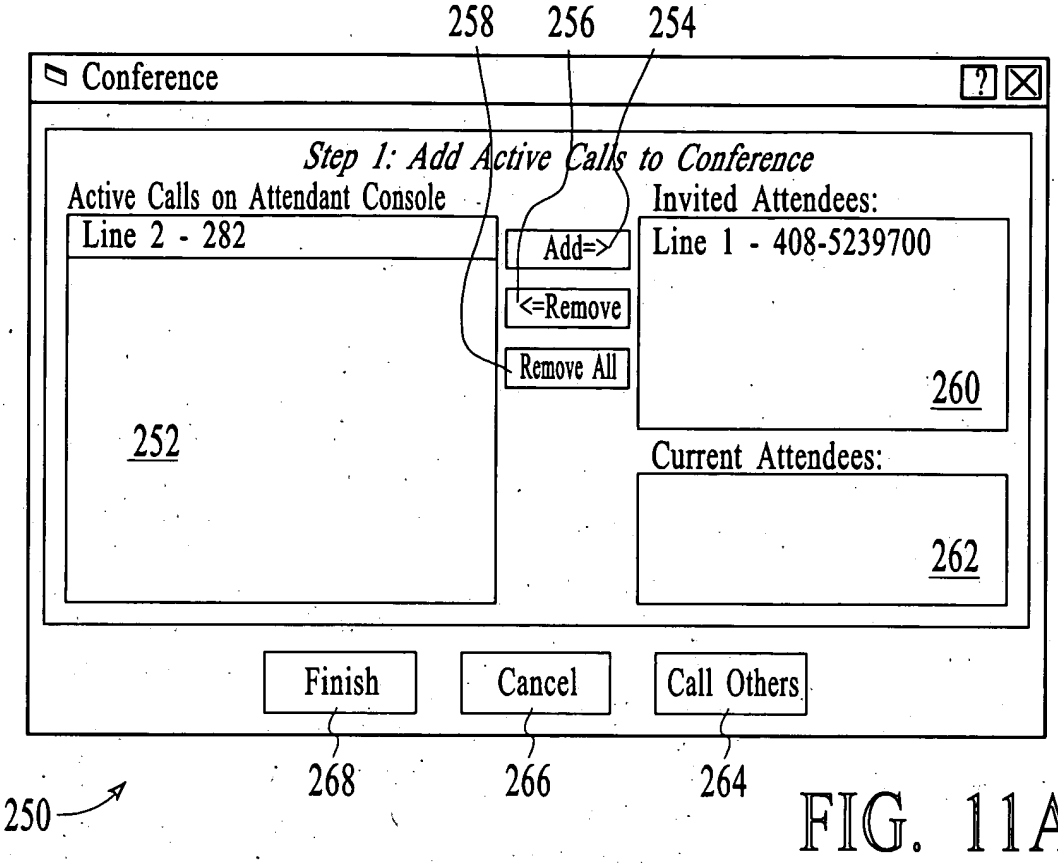


FIG. 11A

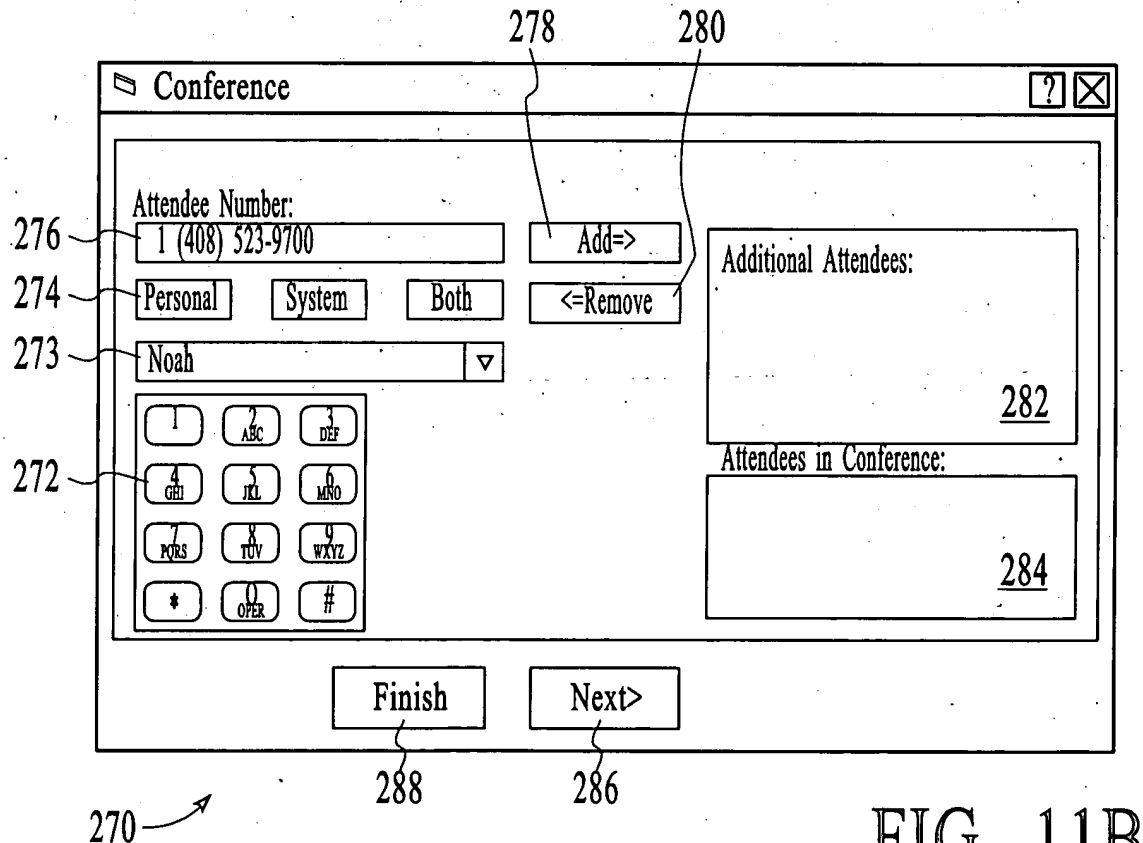


FIG. 11B

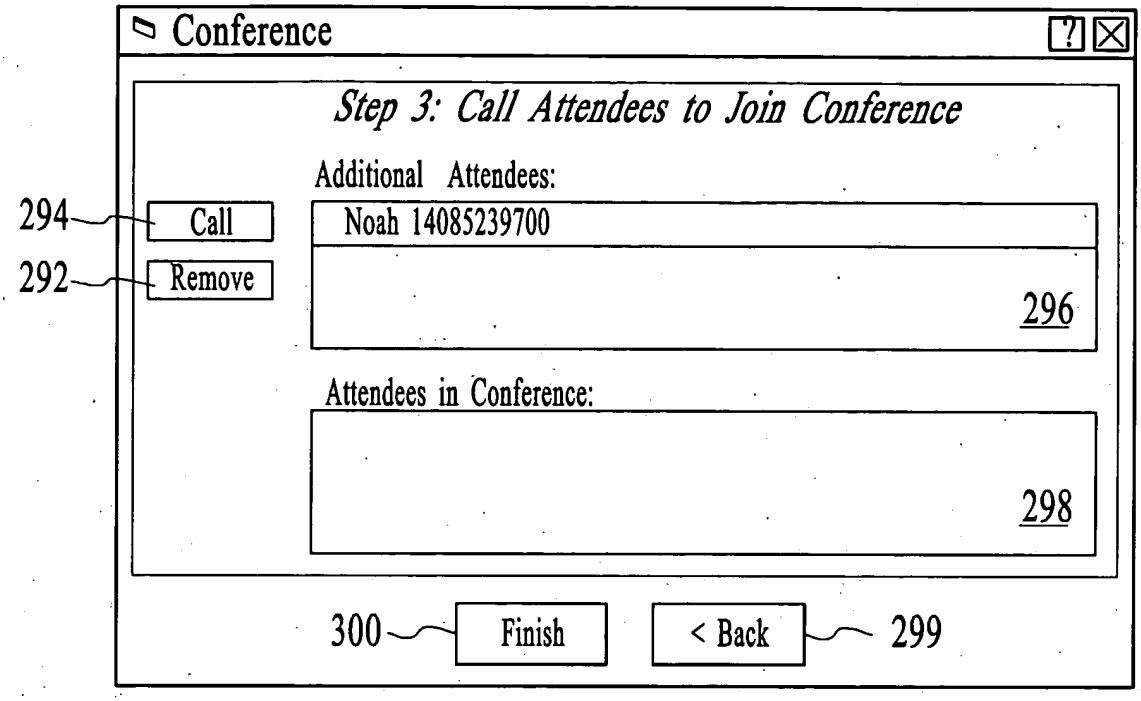


FIG. 11C

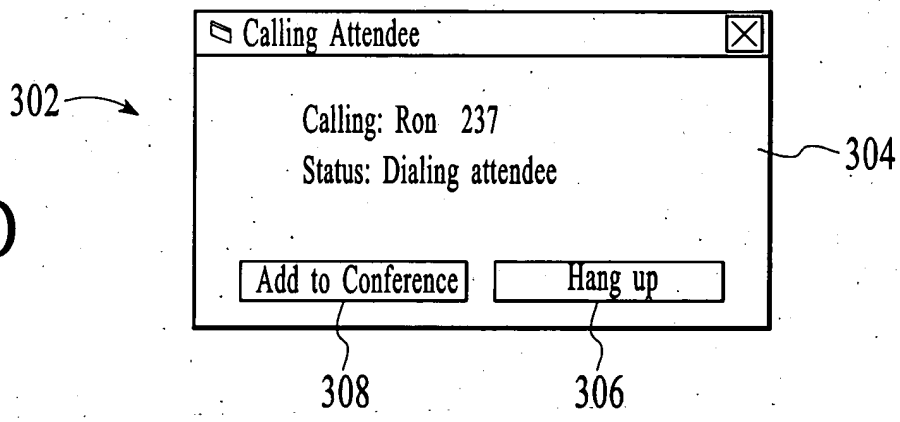


FIG. 11D

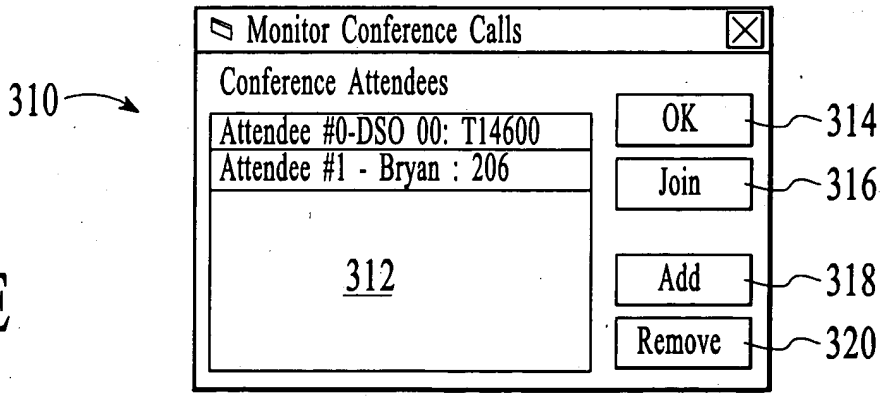


FIG. 11E

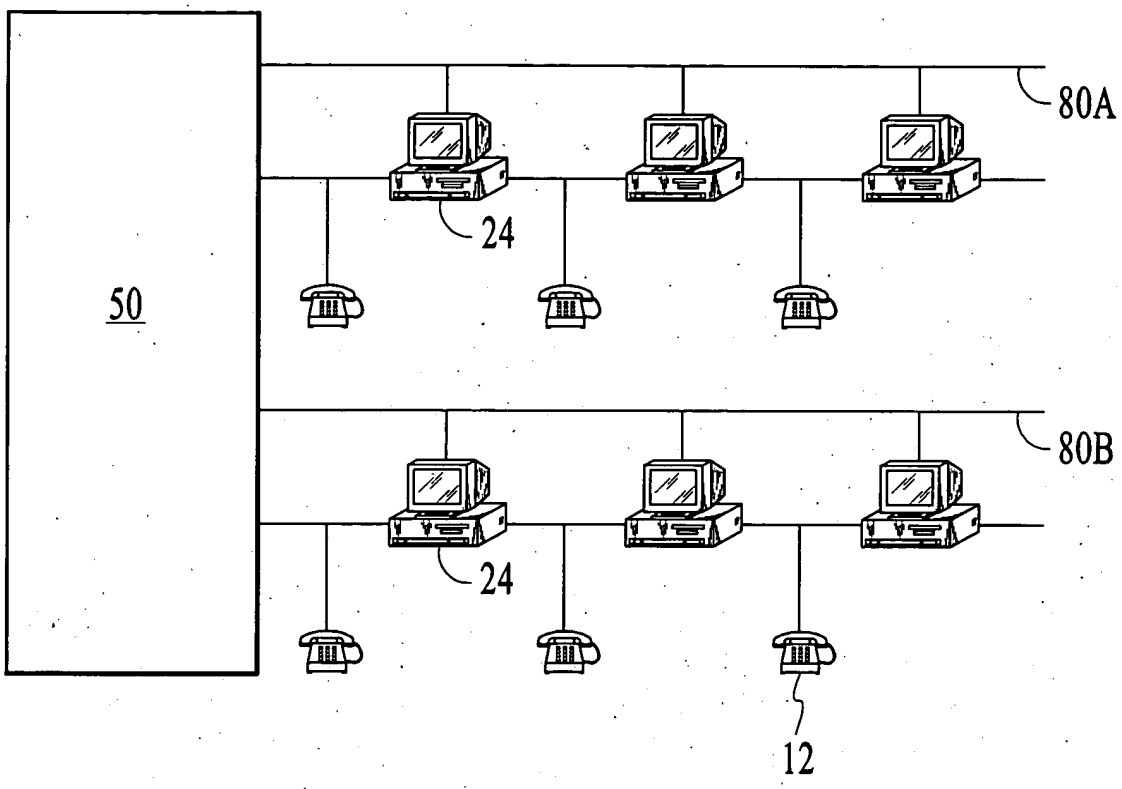


FIG. 12

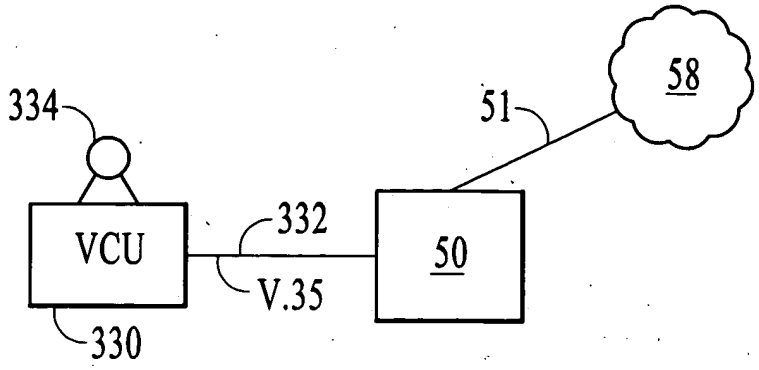


FIG. 13A

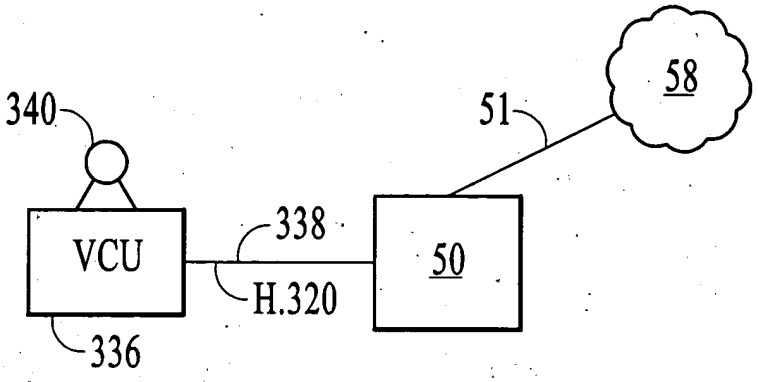


FIG. 13B

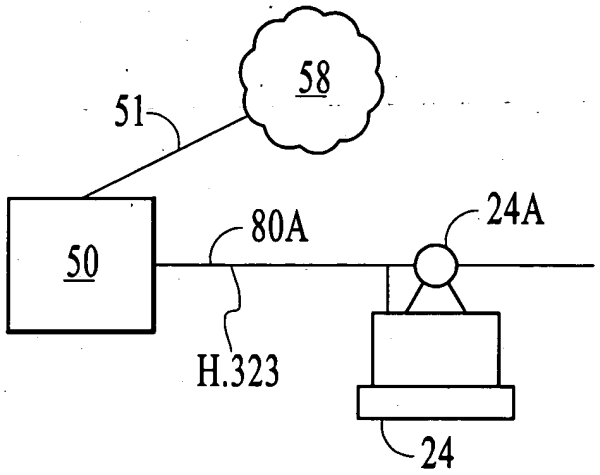


FIG. 13C

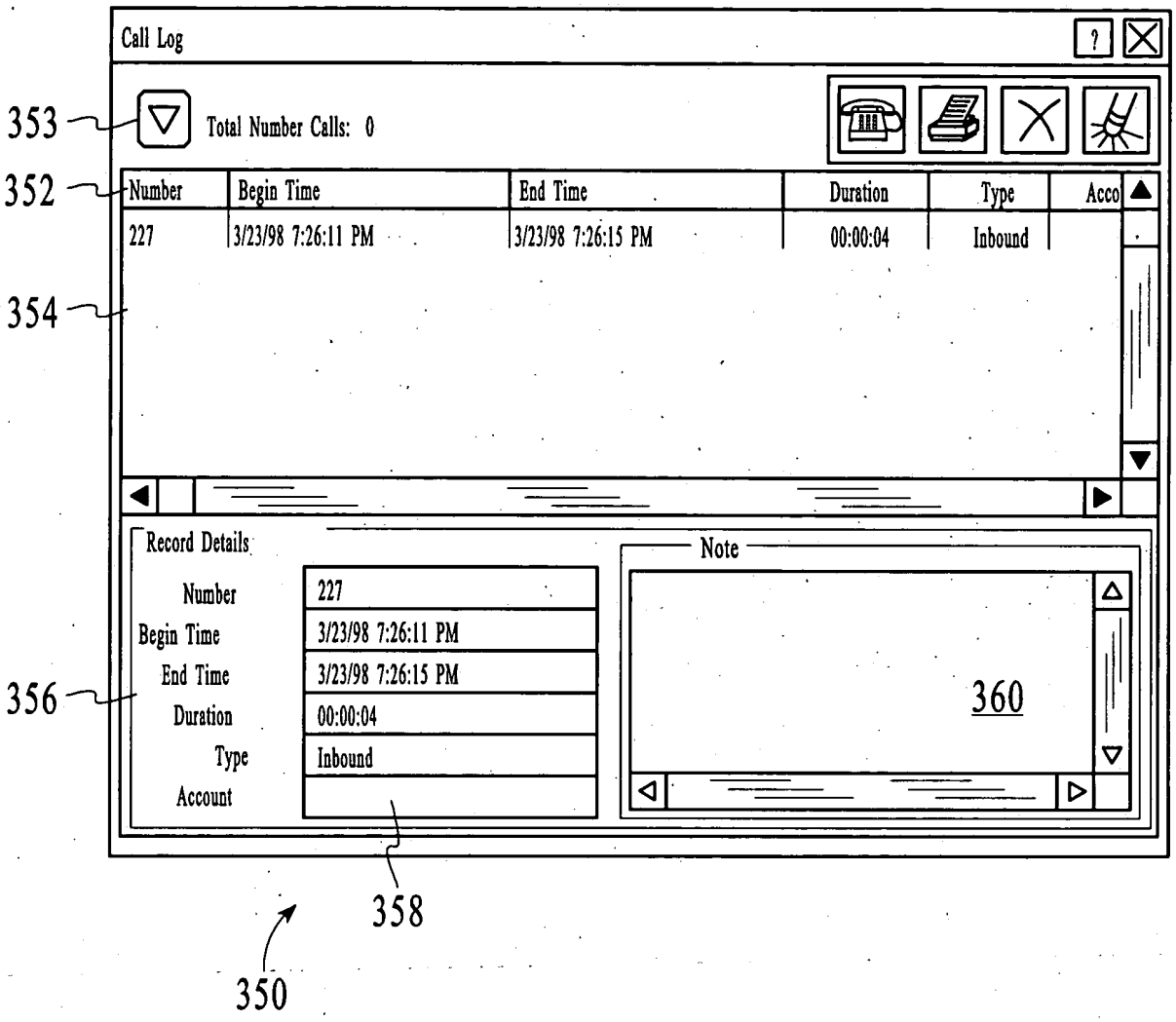

Call Log
353
Total Number Calls: 0
352
Number
Begin Time
End Time
Duration
Type
Acco
227
3/23/98 7:26:11 PM
3/23/98 7:26:15 PM
00:00:04
Inbound
354
Record Details
Number
Begin Time
End Time
Duration
Type
Account
227
3/23/98 7:26:11 PM
3/23/98 7:26:15 PM
00:00:04
Inbound
356
Note
360
358
350

FIG. 14

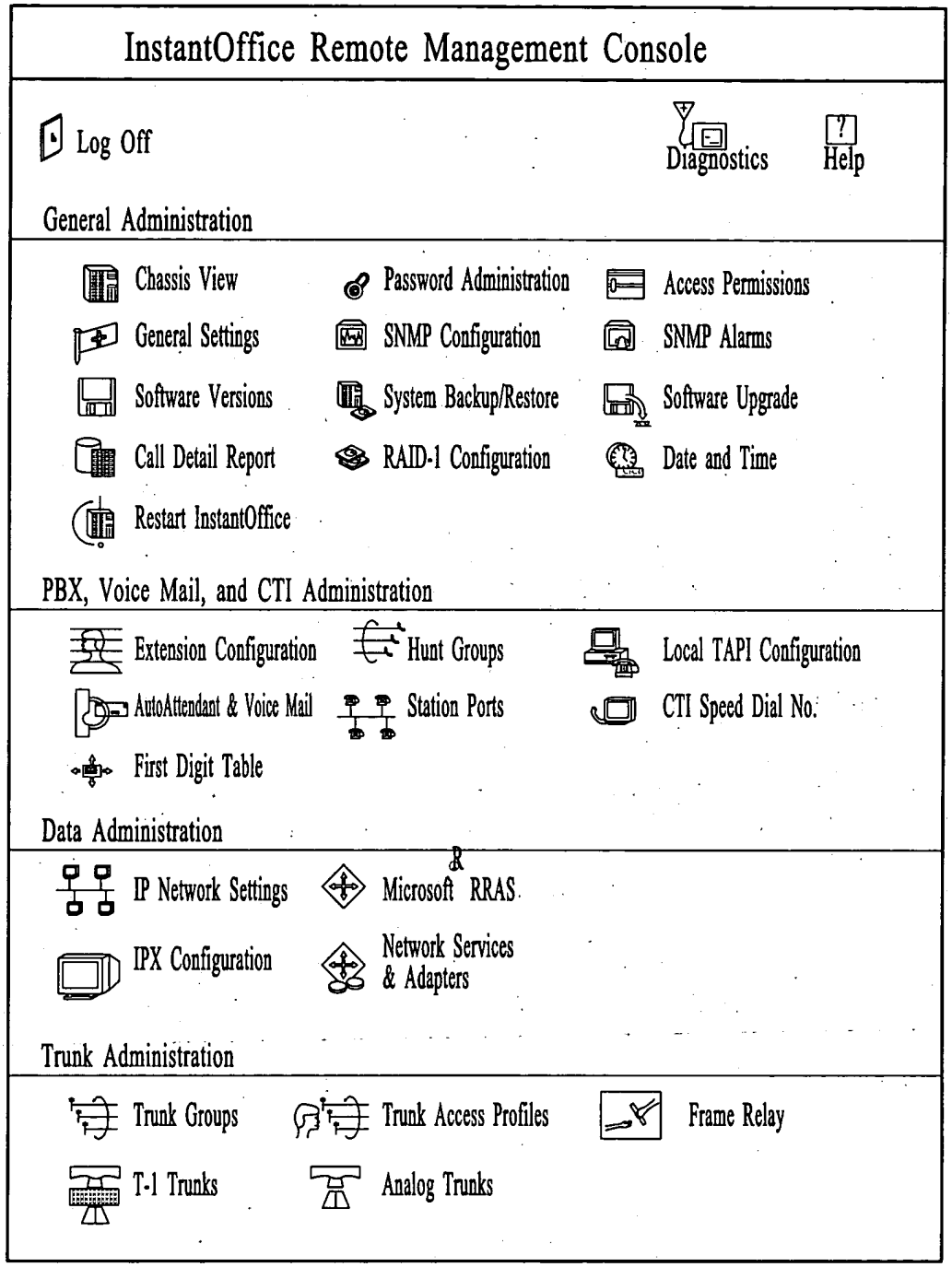

InstantOffice Remote Management Console
Log Off
Diagnostics
Help
General Administration
Chassis View
Password Administration
Access Permissions
General Settings
SNMP Configuration
SNMP Alarms
Software Versions
System Backup/Restore
Software Upgrade
Call Detail Report
RAID-1 Configuration
Date and Time
Restart InstantOffice
PBX, Voice Mail, and CTI Administration
Extension Configuration
Hunt Groups
Local TAPI Configuration
AutoAttendant & Voice Mail
Station Ports
CTI Speed Dial No.
First Digit Table
Data Administration
IP Network Settings
Microsoft RRAS
IPX Configuration
Network Services & Adapters
Trunk Administration
Trunk Groups
Trunk Access Profiles
Frame Relay
T-1 Trunks
Analog Trunks

FIG. 15

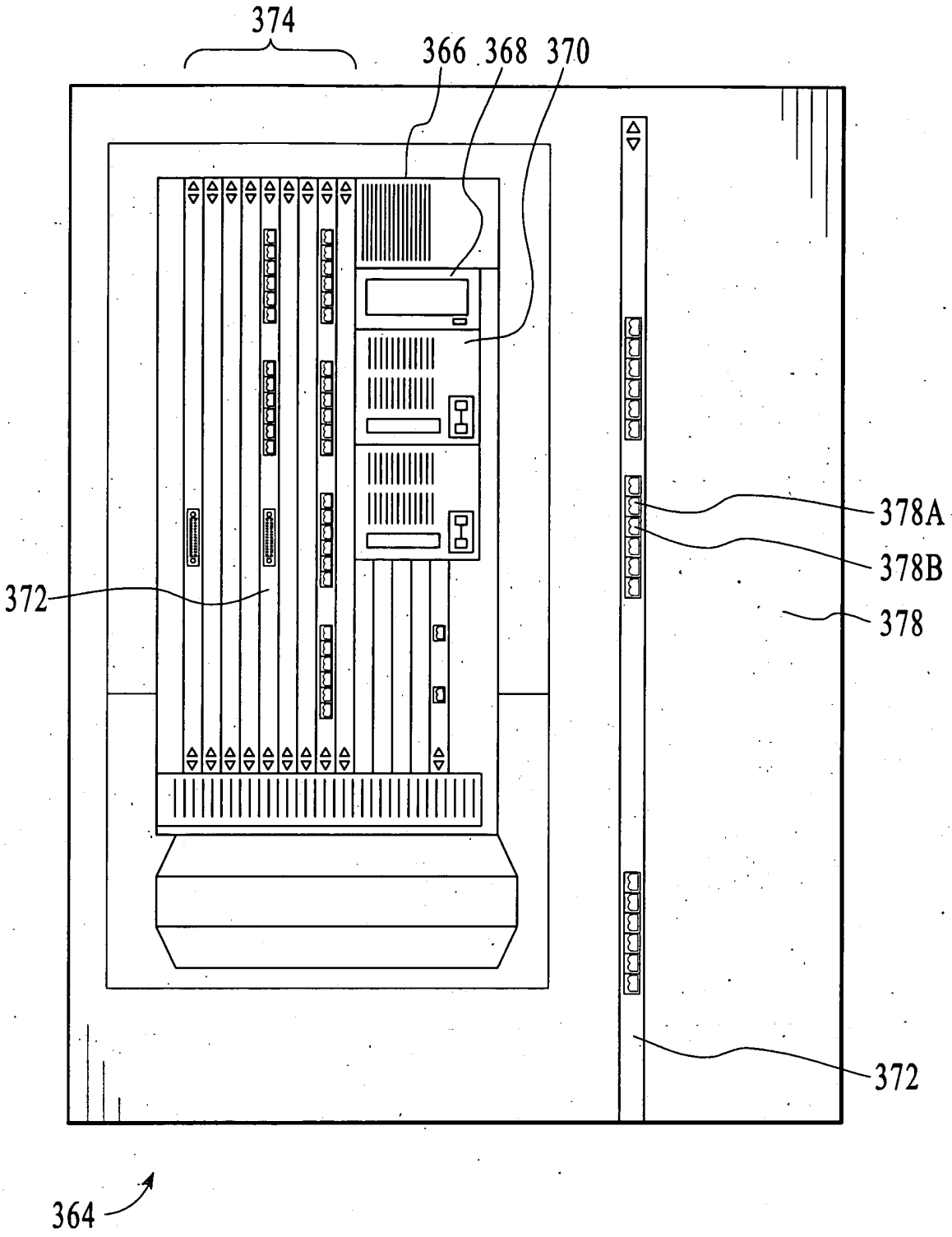


FIG. 16A

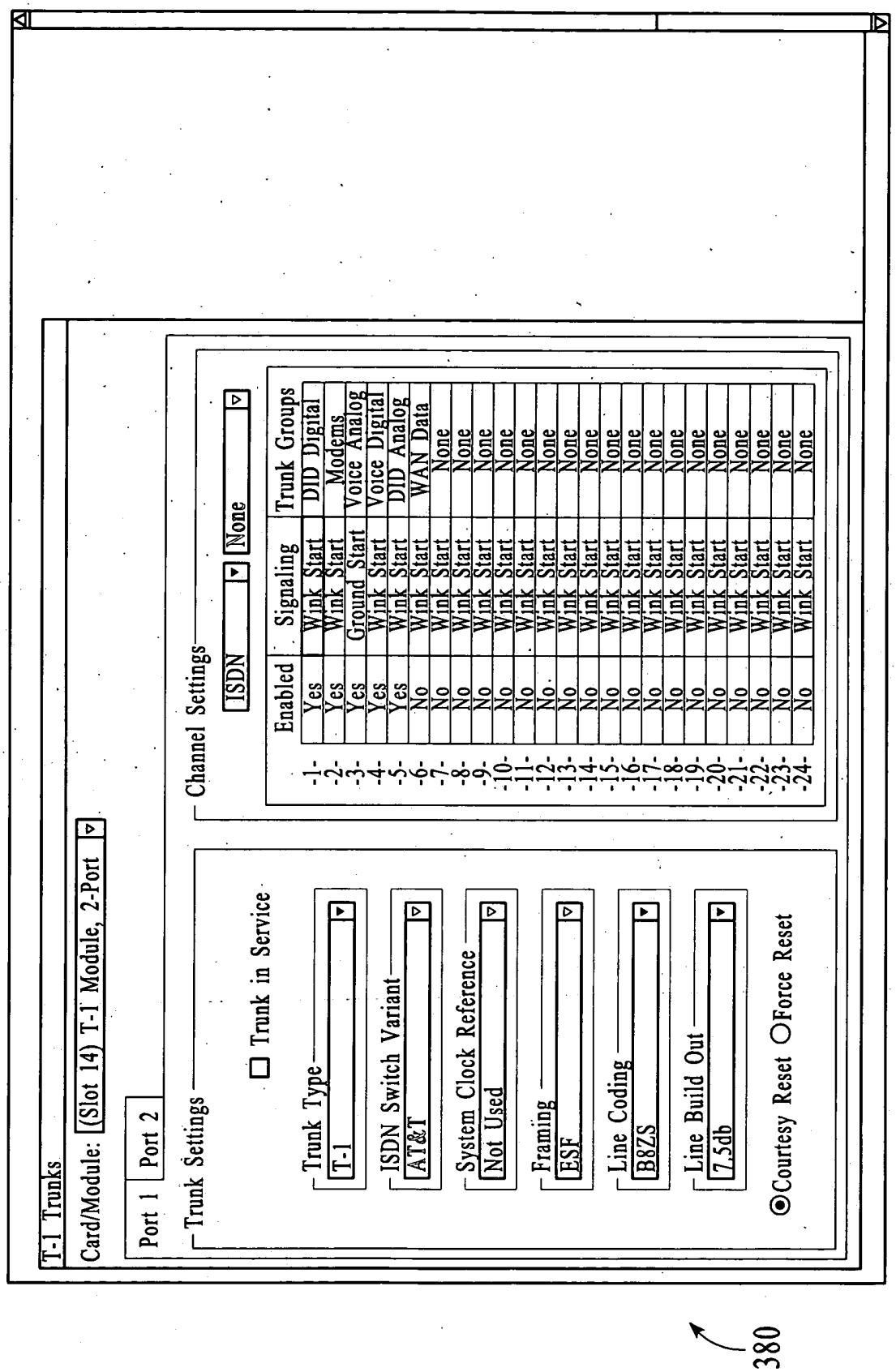

T-1 Trunks
Card/Module: (Slot 14) T-1 Module, 2-Port
Port 1
Port 2
Trunk Settings
Trunk in Service
Trunk Type
T-1
ISDN Switch Variant
AT&T
System Clock Reference
Not Used
Framing
ESF
Line Coding
B8ZS
Line Build Out
7.5db
Courtesy Reset
Force Reset
Channel Settings
ISDN
None
Enabled
Signaling
Trunk Groups
-1- Yes Wink Start DID Digital
-2- Yes Wink Start Modems
-3- Yes Ground Start Voice Analog
-4- Yes Wink Start Voice Digital
-5- Yes Wink Start DID Analog
-6- No Wink Start WAN Data
-7- No Wink Start None
-8- No Wink Start None
-9- No Wink Start None
-10- No Wink Start None
-11- No Wink Start None
-12- No Wink Start None
-13- No Wink Start None
-14- No Wink Start None
-15- No Wink Start None
-16- No Wink Start None
-17- No Wink Start None
-18- No Wink Start None
-19- No Wink Start None
-20- No Wink Start None
-21- No Wink Start None
-22- No Wink Start None
-23- No Wink Start None
-24- No Wink Start None
380

FIG. 16B

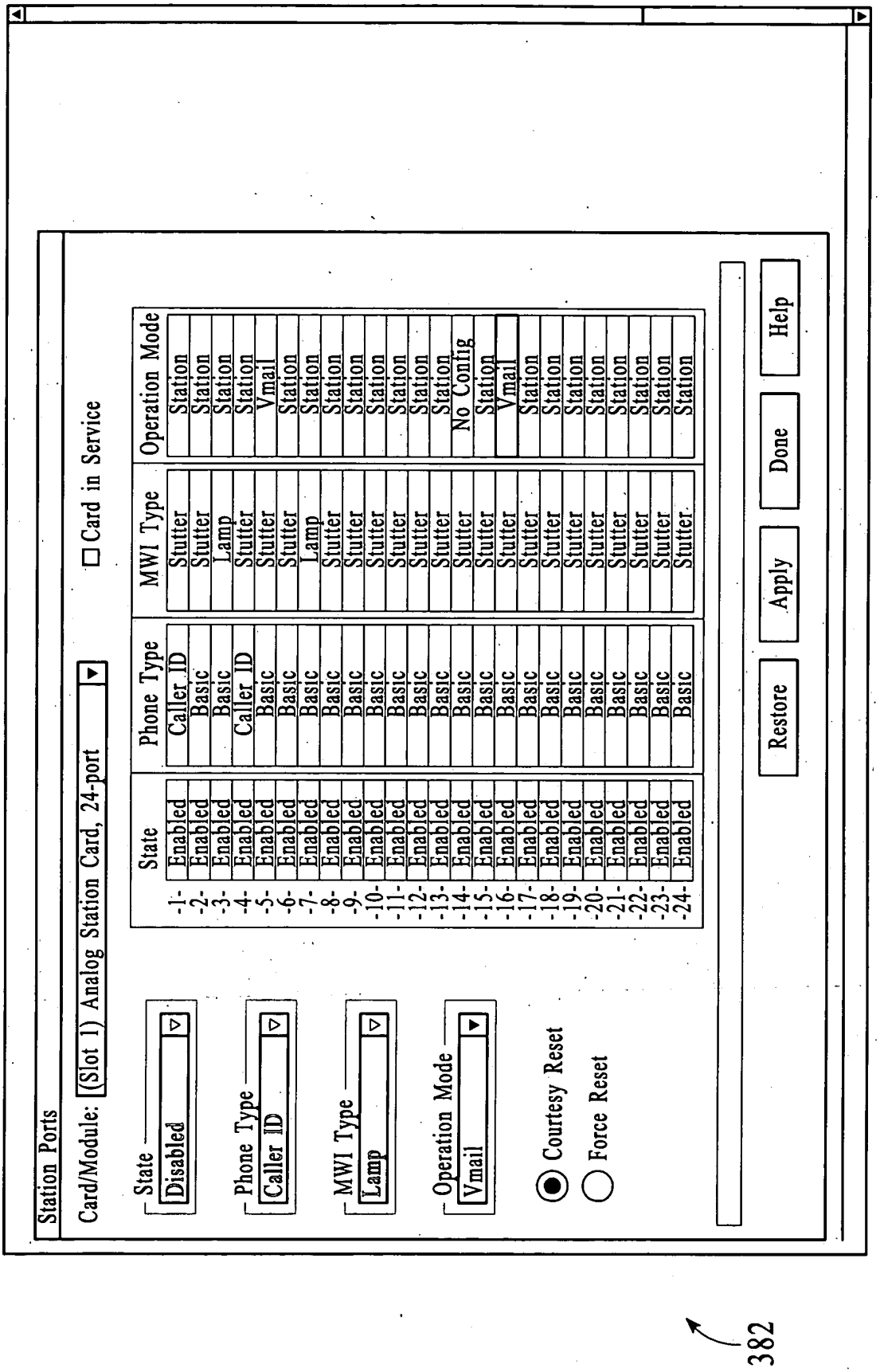

Station Ports
Card/Module: (Slot 1) Analog Station Card, 24-port
Card in Service
State
Disabled
Phone Type
Caller ID
MWI Type
Lamp
Operation Mode
Vmail
Courtesy Reset
Force Reset
State
Phone Type
MWI Type
Operation Mode
-1- Enabled Caller ID Stutter Station
-2- Enabled Basic Stutter Station
-3- Enabled Basic Lamp Station
-4- Enabled Caller ID Stutter Station
-5- Enabled Basic Stutter Vmail
-6- Enabled Basic Stutter Station
-7- Enabled Basic Lamp Station
-8- Enabled Basic Stutter Station
-9- Enabled Basic Stutter Station
-10- Enabled Basic Stutter Station
-11- Enabled Basic Stutter Station
-12- Enabled Basic Stutter Station
-13- Enabled Basic Stutter Station
-14- Enabled Basic Stutter No Config
-15- Enabled Basic Stutter Station
-16- Enabled Basic Stutter Vmail
-17- Enabled Basic Stutter Station
-18- Enabled Basic Stutter Station
-19- Enabled Basic Stutter Station
-20- Enabled Basic Stutter Station
-21- Enabled Basic Stutter Station
-22- Enabled Basic Stutter Station
-23- Enabled Basic Stutter Station
-24- Enabled Basic Stutter Station
Restore
Apply
Done
Help
382

FIG. 16C

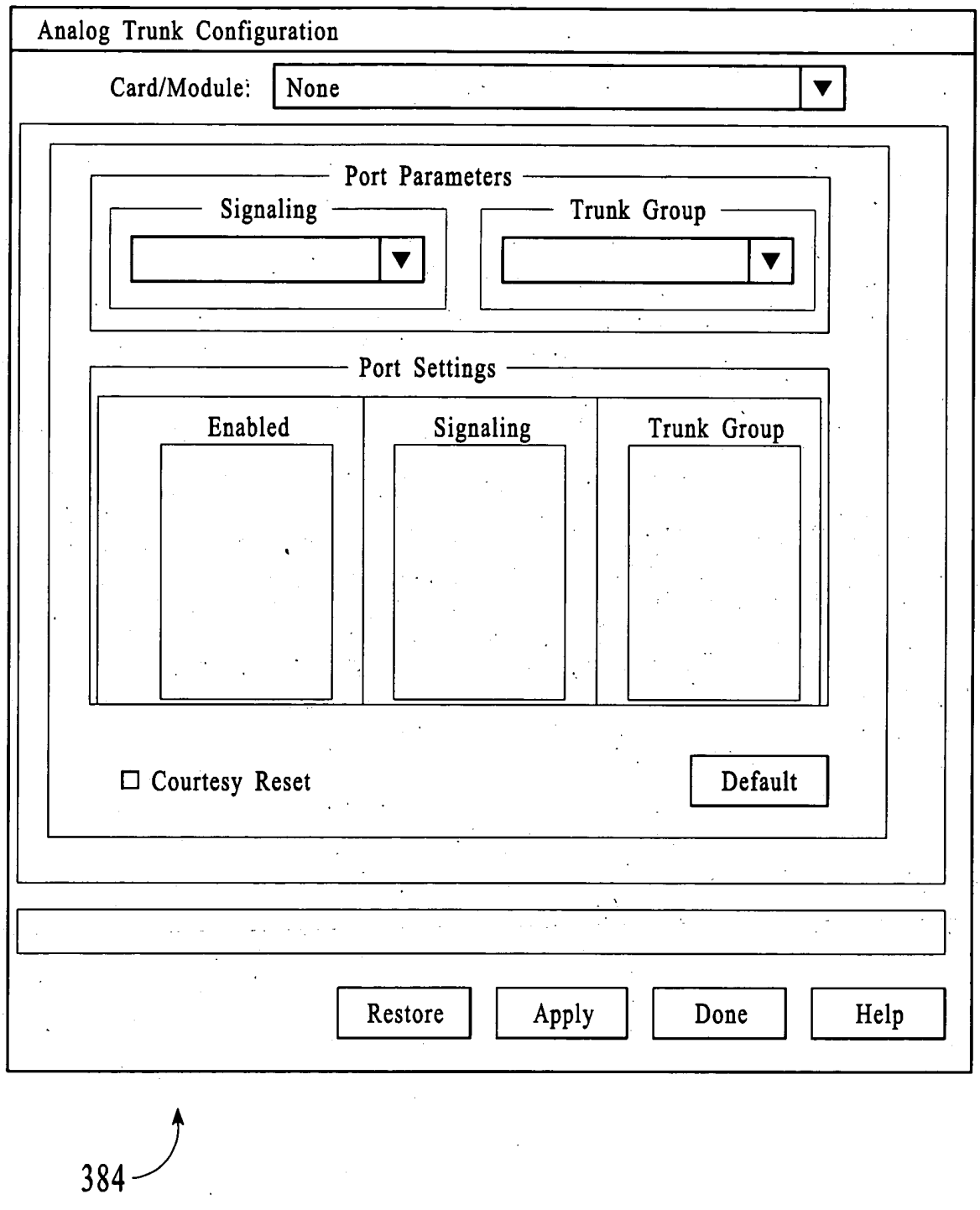

Analog Trunk Configuration
Card/Module:
None
Port Parameters
Signaling
Trunk Group
Port Settings
Enabled
Signaling
Trunk Group
Courtesy Reset
Default
Restore
Apply
Done
Help
384

FIG. 16D

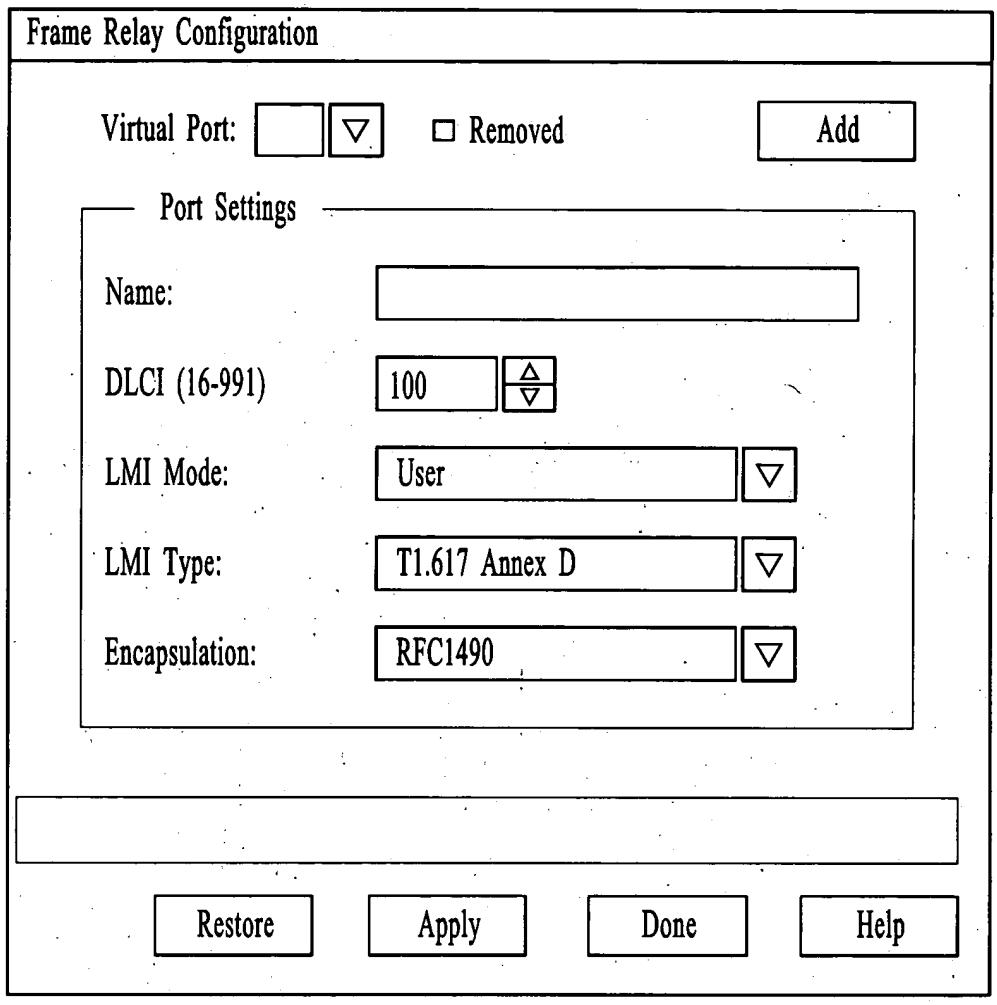

Frame Relay Configuration
Virtual Port:
Removed
Add
Port Settings
Name:
DLCI (16-991)
100
LMI Mode:
User
LMI Type:
T1.617 Annex D
Encapsulation:
RFC1490
Restore
Apply
Done
Help
386

FIG. 16E

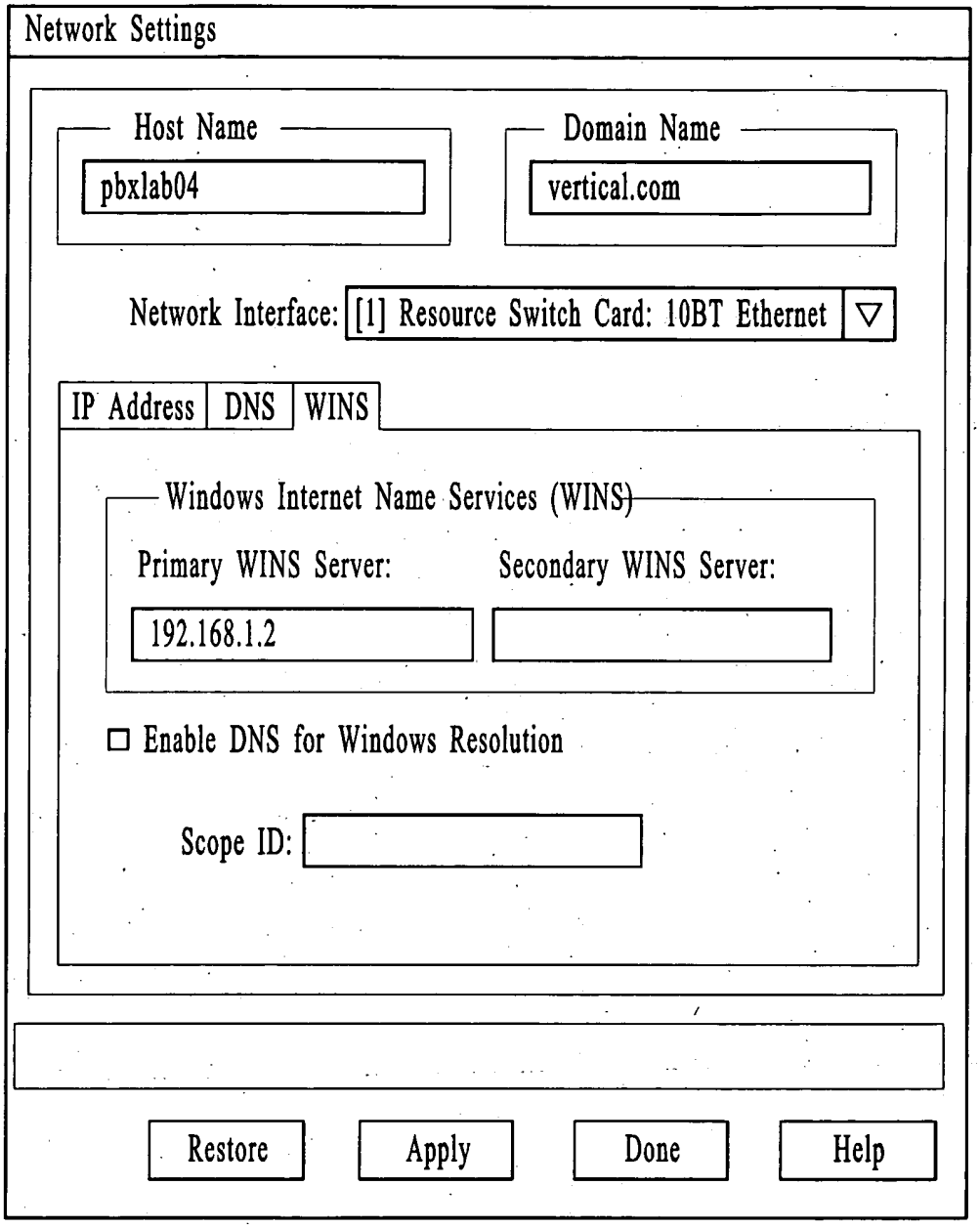

Network Settings
Host Name
pbxlab04
Domain Name
vertical.com
Network Interface:
[1] Resource Switch Card: 10BT Ethernet
IP Address
DNS
WINS
Windows Internet Name Services (WINS)
Primary WINS Server:
Secondary WINS Server:
192.168.1.2
Enable DNS for Windows Resolution
Scope ID:
Restore
Apply
Done
Help
388

FIG. 16F

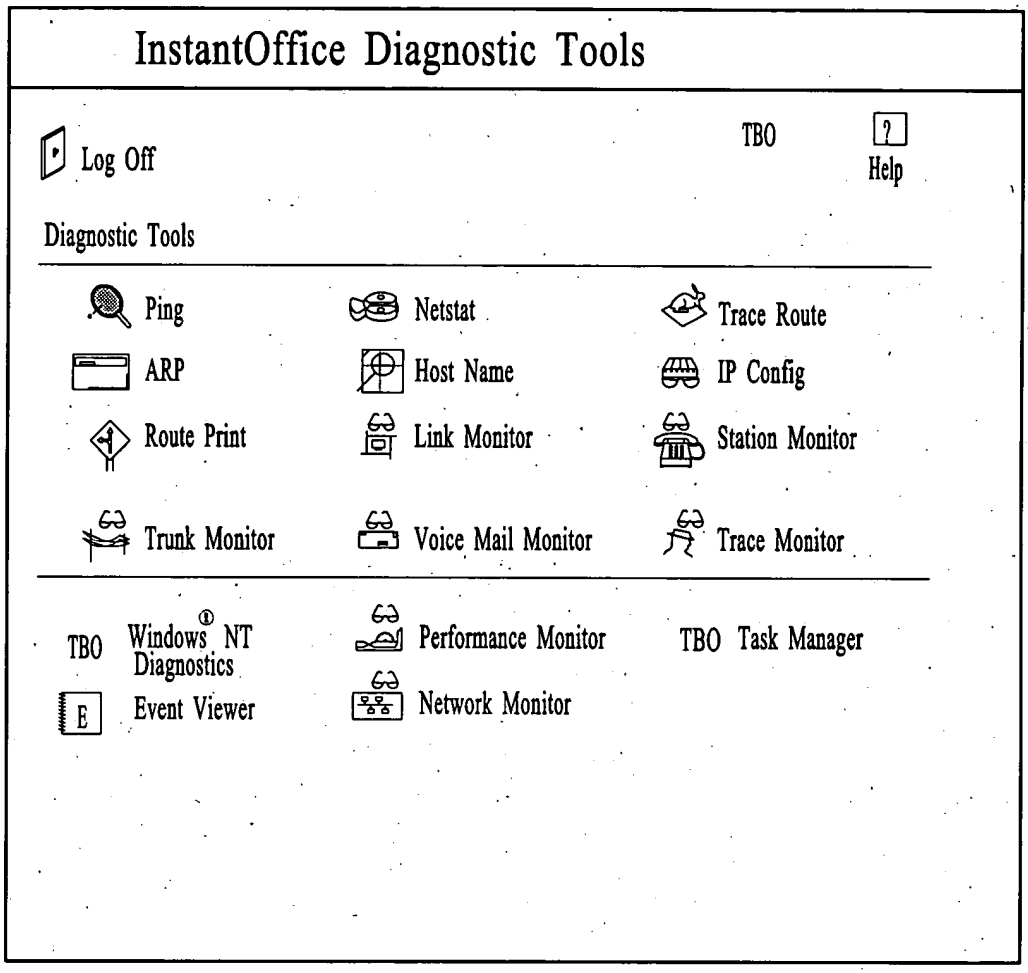

InstantOffice Diagnostic Tools
Log Off
TBO
Help
Diagnostic Tools
Ping
Netstat
Trace Route
ARP
Host Name
IP Config
Route Print
Link Monitor
Station Monitor
Trunk Monitor
Voice Mail Monitor
Trace Monitor
TBO
Windows NT Diagnostics
Performance Monitor
TBO
Task Manager
Event Viewer
Network Monitor

FIG. 17A

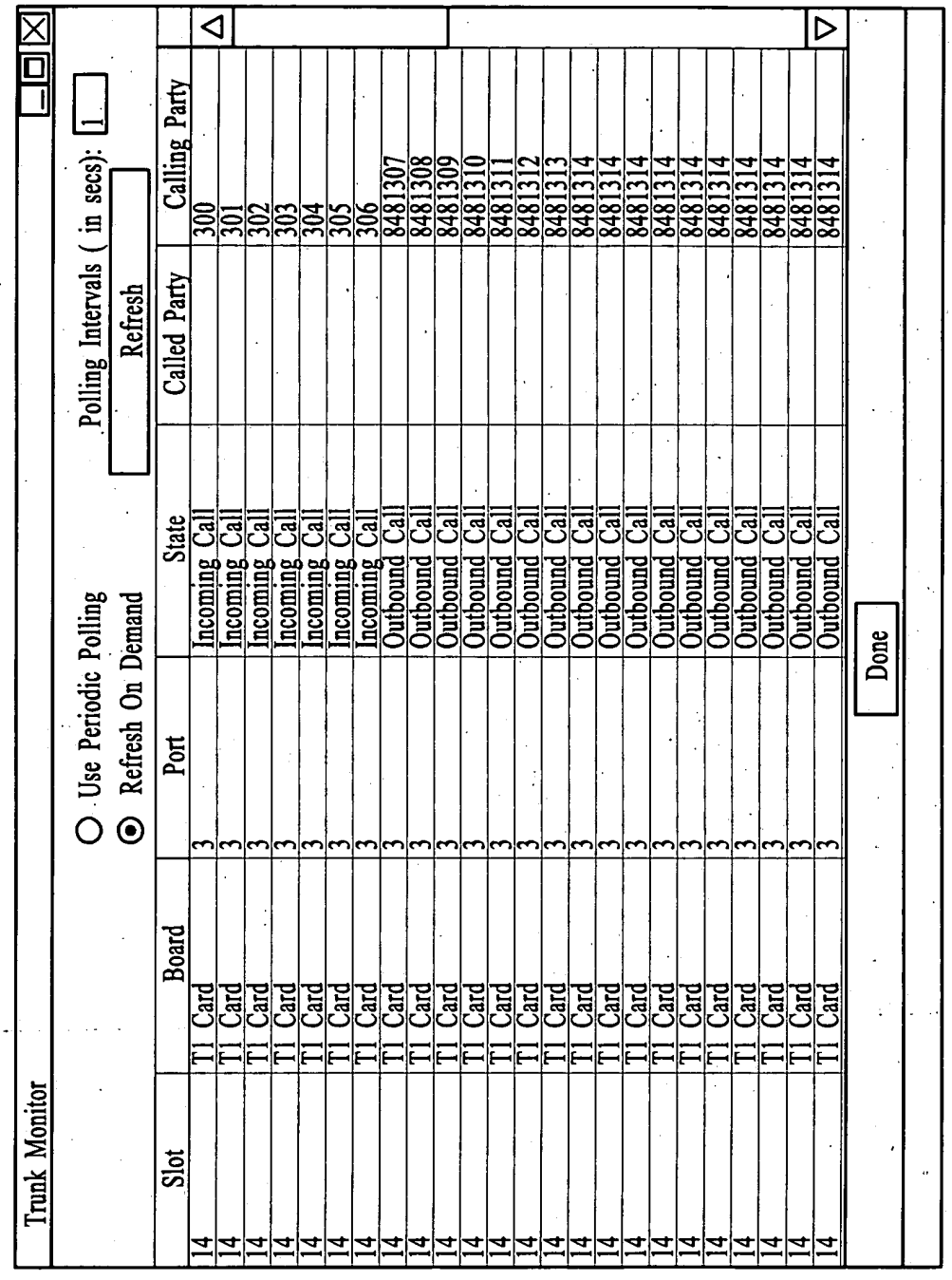

Trunk Monitor
Use Periodic Polling
Refresh On Demand
Polling Intervals (in secs): 1
Refresh
Slot
Board
Port
State
Called Party
Calling Party
14 T1 Card 3 Incoming Call 300
14 T1 Card 3 Incoming Call 301
14 T1 Card 3 Incoming Call 302
14 T1 Card 3 Incoming Call 303
14 T1 Card 3 Incoming Call 304
14 T1 Card 3 Incoming Call 305
14 T1 Card 3 Incoming Call 306
14 T1 Card 3 Outbound Call 8481307
14 T1 Card 3 Outbound Call 8481308
14 T1 Card 3 Outbound Call 8481309
14 T1 Card 3 Outbound Call 8481310
14 T1 Card 3 Outbound Call 8481311
14 T1 Card 3 Outbound Call 8481312
14 T1 Card 3 Outbound Call 8481313
14 T1 Card 3 Outbound Call 8481314
14 T1 Card 3 Outbound Call 8481314
14 T1 Card 3 Outbound Call 8481314
14 T1 Card 3 Outbound Call 8481314
14 T1 Card 3 Outbound Call 8481314
14 T1 Card 3 Outbound Call 8481314
14 T1 Card 3 Outbound Call 8481314
14 T1 Card 3 Outbound Call 8481314
Done
390

FIG. 17B

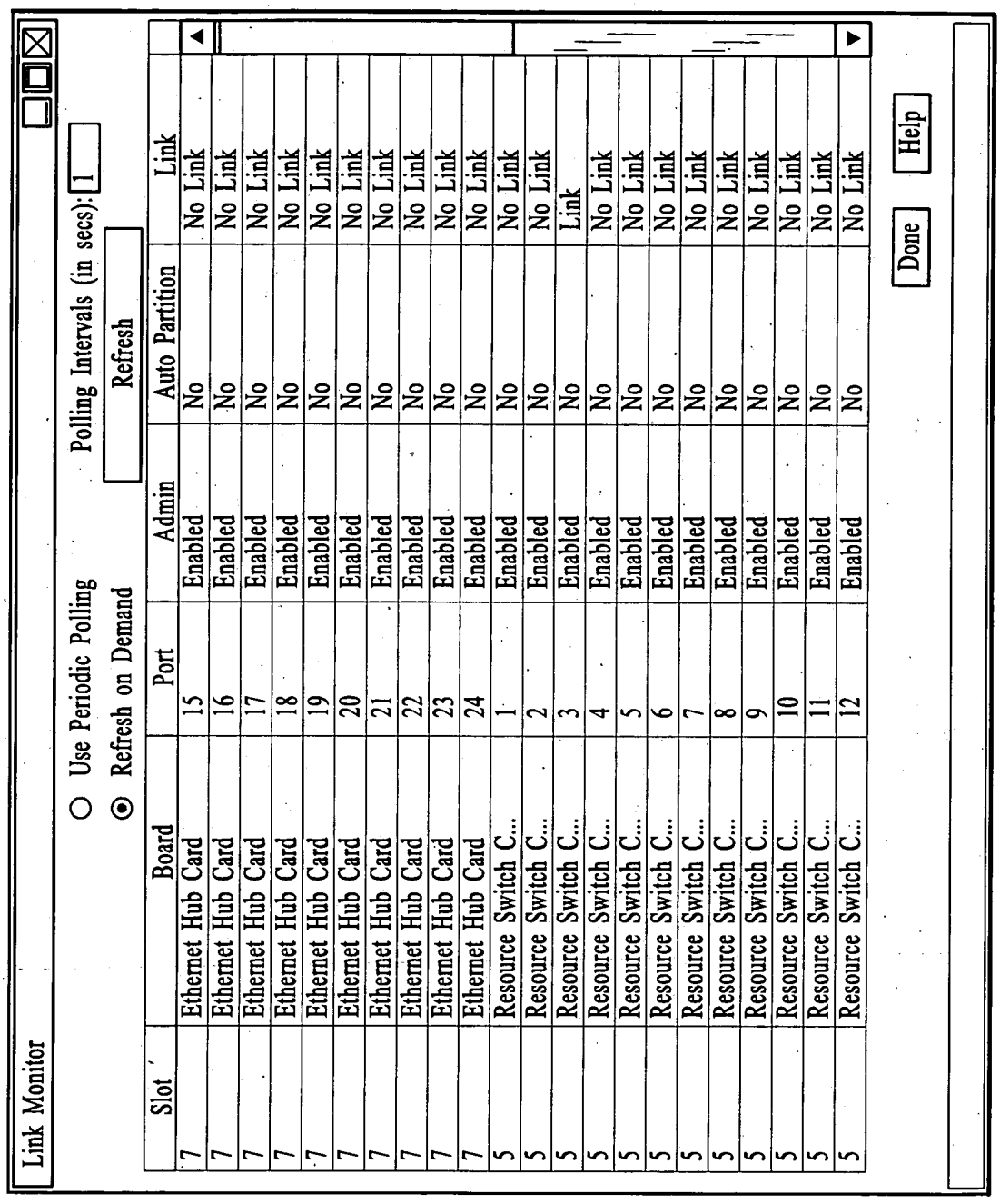
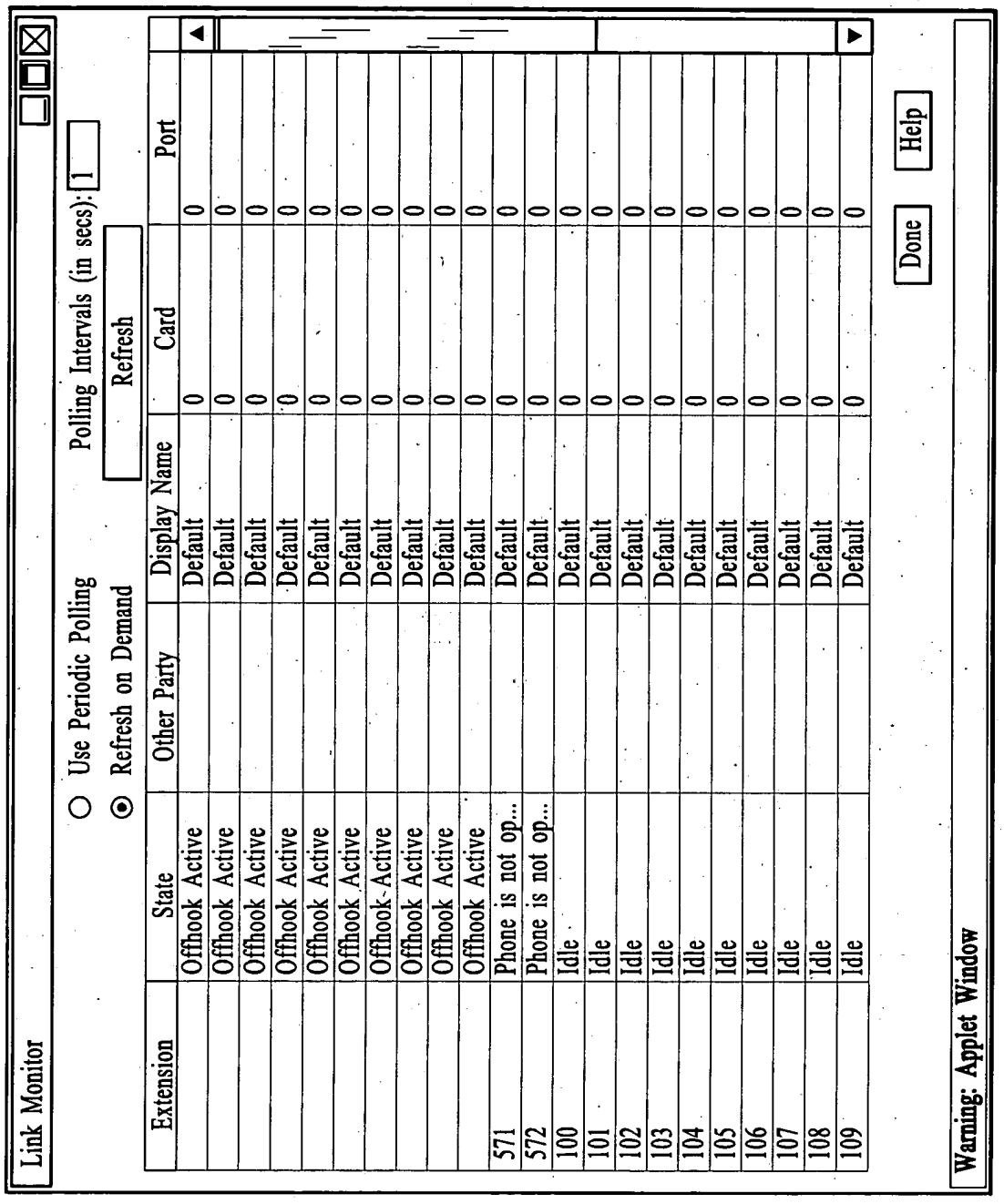

Link Monitor
Use Periodic Polling
Refresh on Demand
Polling Intervals (in secs): 1
Refresh
Slot
Board
Port
Admin
Auto Partition
Link
7 Ethernet Hub Card 15 Enabled No No Link
7 Ethernet Hub Card 16 Enabled No No Link
7 Ethernet Hub Card 17 Enabled No No Link
7 Ethernet Hub Card 18 Enabled No No Link
7 Ethernet Hub Card 19 Enabled No No Link
7 Ethernet Hub Card 20 Enabled No No Link
7 Ethernet Hub Card 21 Enabled No No Link
7 Ethernet Hub Card 22 Enabled No No Link
7 Ethernet Hub Card 23 Enabled No No Link
7 Ethernet Hub Card 24 Enabled No No Link
5 Resource Switch C... 1 Enabled No No Link
5 Resource Switch C... 2 Enabled No No Link
5 Resource Switch C... 3 Enabled No Link
5 Resource Switch C... 4 Enabled No No Link
5 Resource Switch C... 5 Enabled No No Link
5 Resource Switch C... 6 Enabled No No Link
5 Resource Switch C... 7 Enabled No No Link
5 Resource Switch C... 8 Enabled No No Link
5 Resource Switch C... 9 Enabled No No Link
5 Resource Switch C... 10 Enabled No No Link
5 Resource Switch C... 11 Enabled No No Link
5 Resource Switch C... 12 Enabled No No Link
Done
Help
392

FIG. 17C


Link Monitor
Use Periodic Polling
Refresh on Demand
Polling Intervals (in secs): 1
Refresh
Extension
State
Other Party
Display Name
Card
Port
Offhook Active
Default
0
Phone is not op...
Idle
571
572
100
101
102
103
104
105
106
107
108
109
Done
Help
Warning: Applet Window

394

FIG. 17D

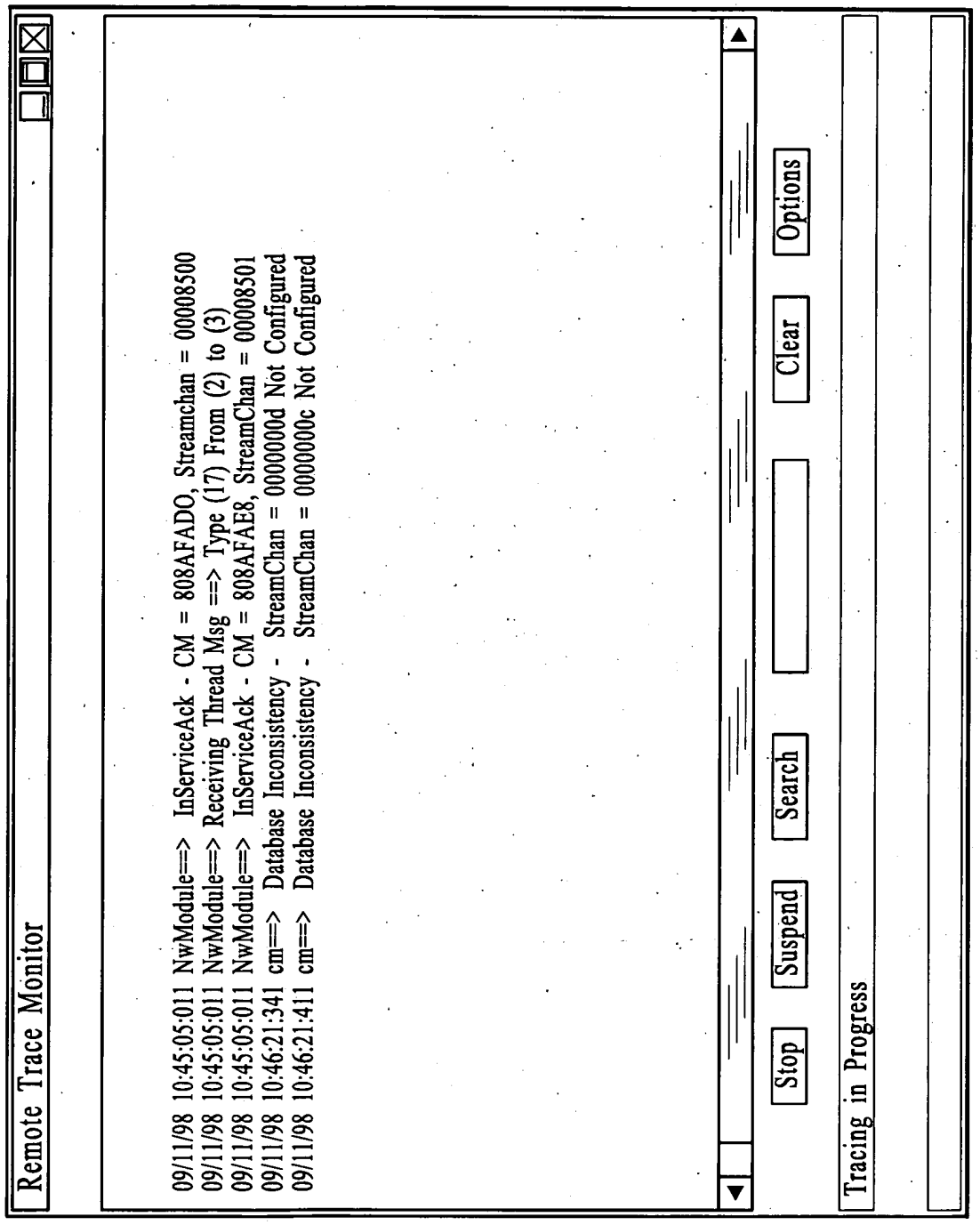

Remote Trace Monitor
09/11/98 10:45:05:011 NwModule==> InServiceAck - CM = 808AFADO, Streamchan = 00008500
09/11/98 10:45:05:011 NwModule==> Receiving Thread Msg ==> Type (17) From (2) to (3)
09/11/98 10:45:05:011 NwModule==> InServiceAck - CM = 808AFAE8, StreamChan = 00008501
09/11/98 10:46:21:341 cm==> Database Inconsistency - StreamChan = 0000000d Not Configured
09/11/98 10:46:21:411 cm==> Database Inconsistency - StreamChan = 0000000c Not Configured
Stop
Suspend
Search
Clear
Options
Tracing in Progress
396

FIG. 17E

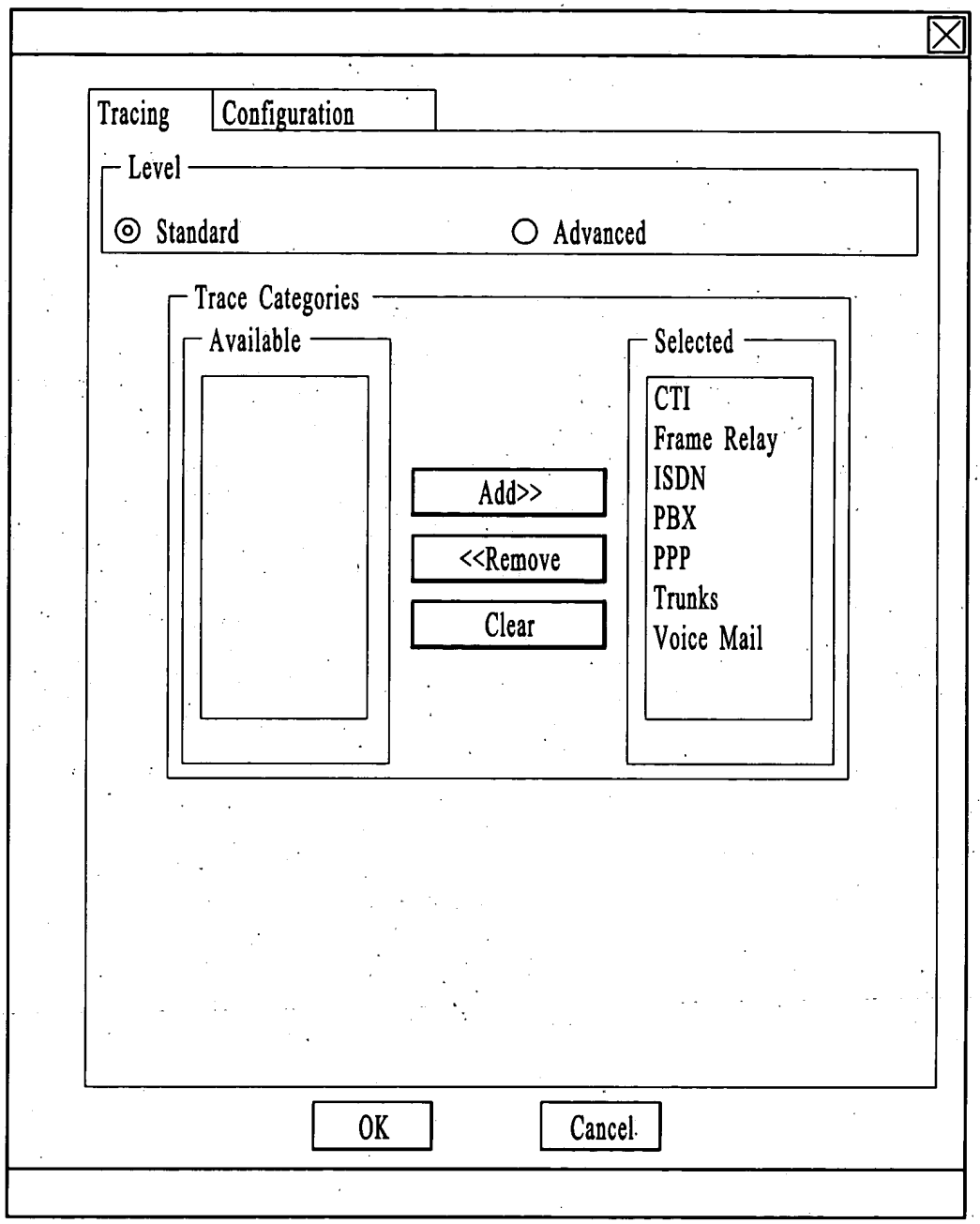

Tracing
Configuration
Level
Standard
Advanced
Trace Categories
Available
Selected
CTI
Frame Relay
ISDN
PBX
PPP
Trunks
Voice Mail
Add>>
<<Remove
Clear
OK
Cancel
397

FIG. 17F

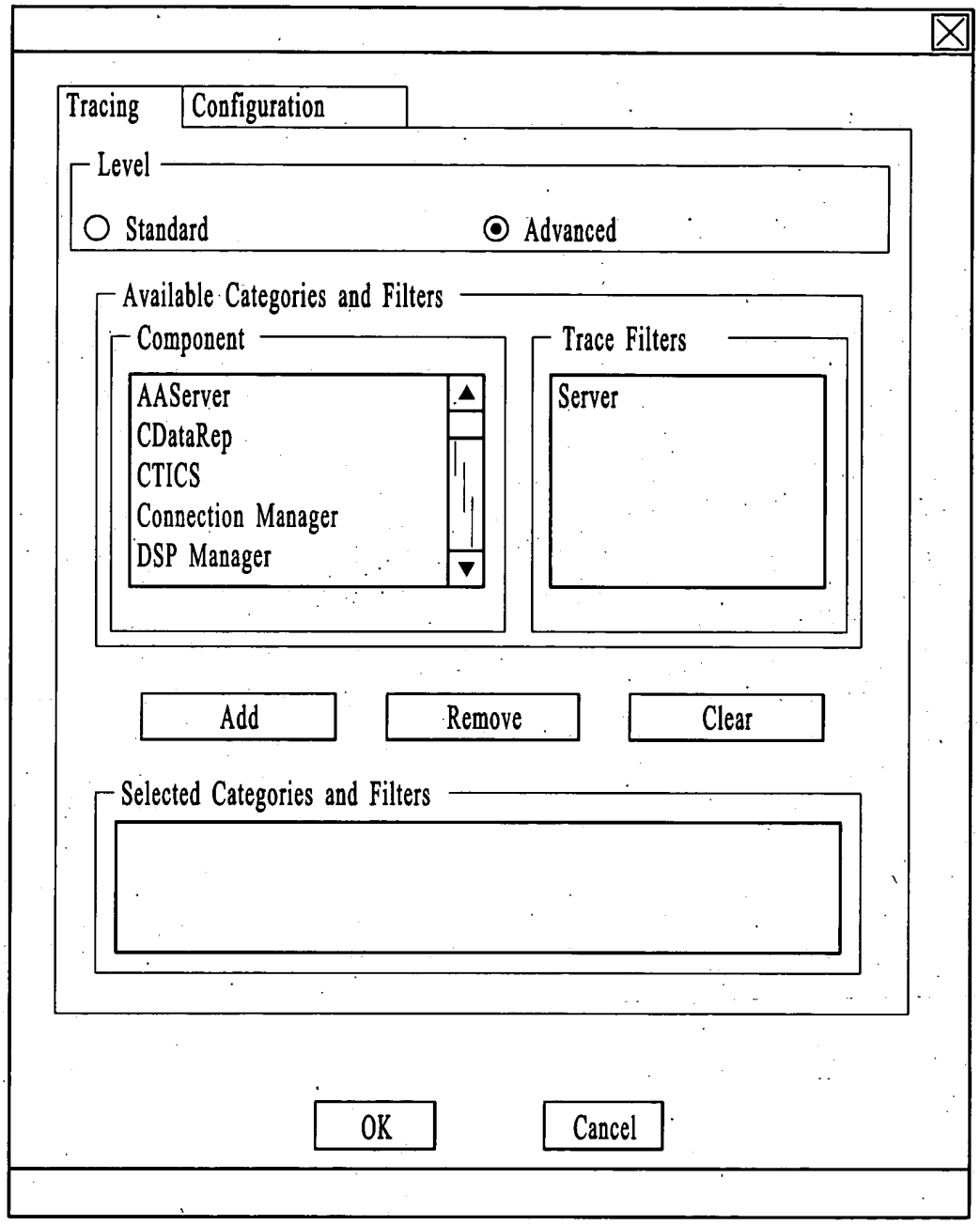
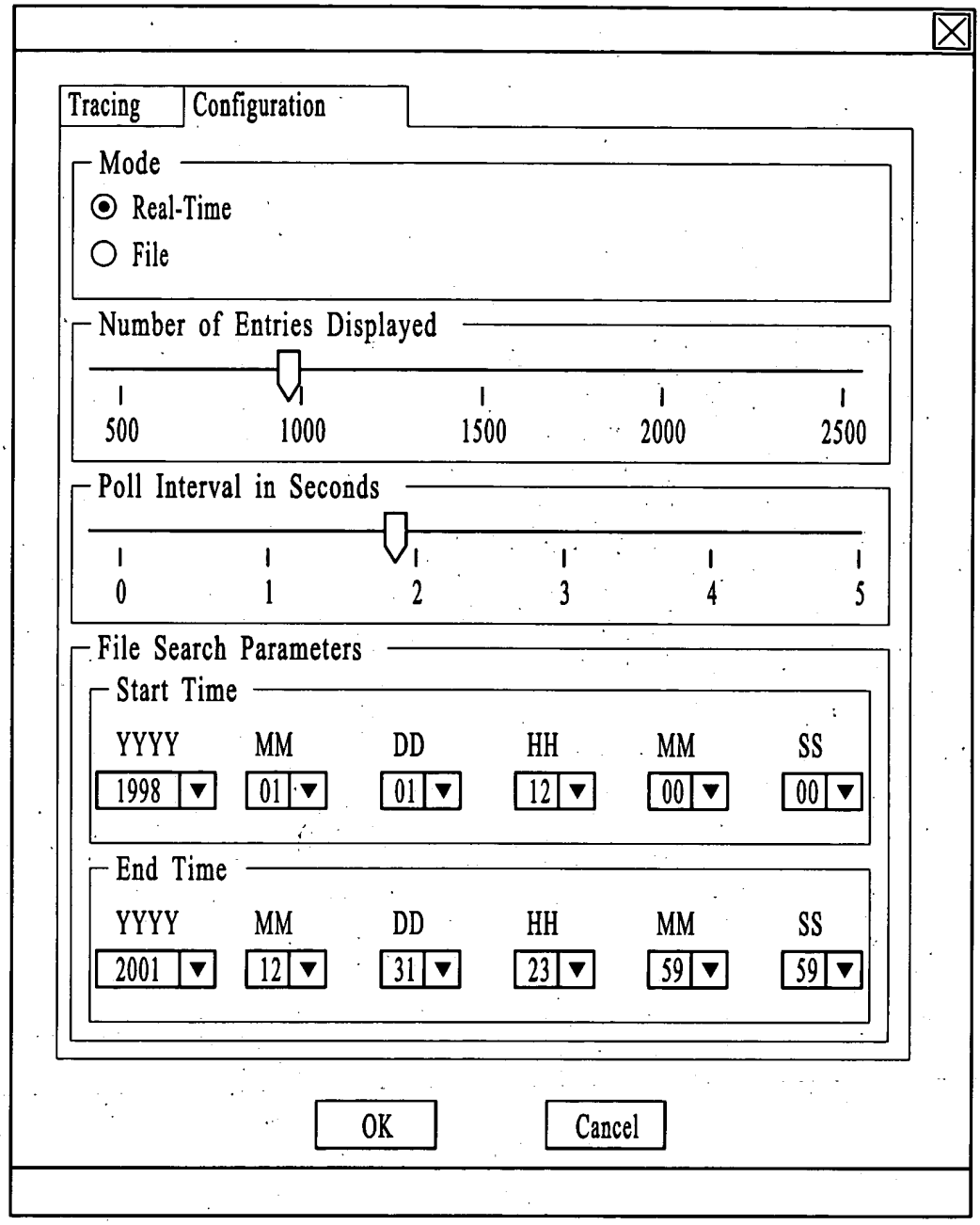

Tracing
Configuration
Level
Standard
Advanced
Available Categories and Filters
Component
AAServer
CDataRep
CTICS
Connection Manager
DSP Manager
Trace Filters
Server
Add
Remove
Clear
Selected Categories and Filters
OK
Cancel
398

FIG. 17G


Tracing
Configuration
Mode
Real-Time
File
Number of Entries Displayed
500
1000
1500
2000
2500
Poll Interval in Seconds
0
1
2
3
4
5
File Search Parameters
Start Time
YYYY
MM
DD
HH
MM
SS
1998
01
01
12
00
00
End Time
YYYY
MM
DD
HH
MM
SS
2001
12
31
23
59
59
OK
Cancel

399

FIG. 17H

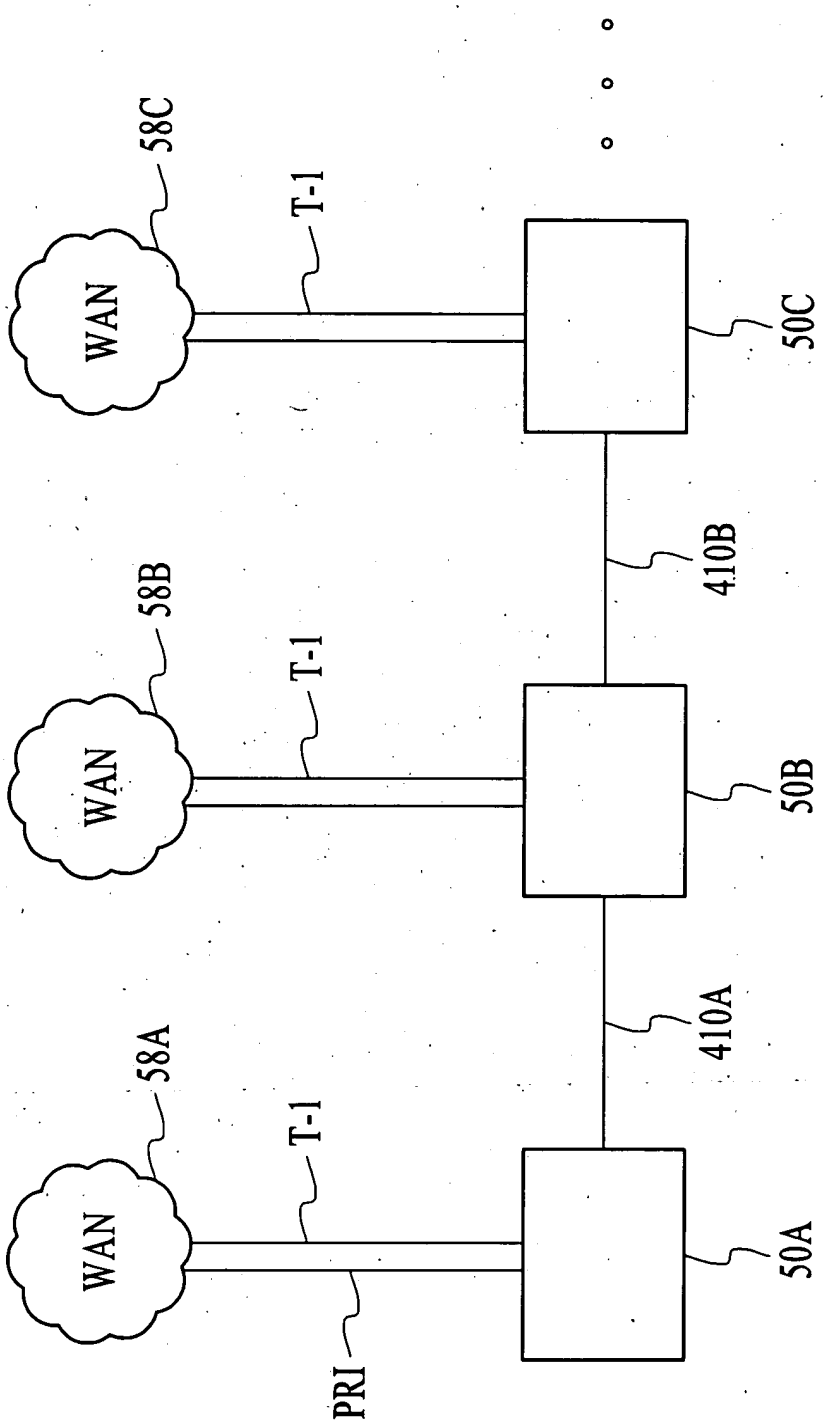


FIG. 18

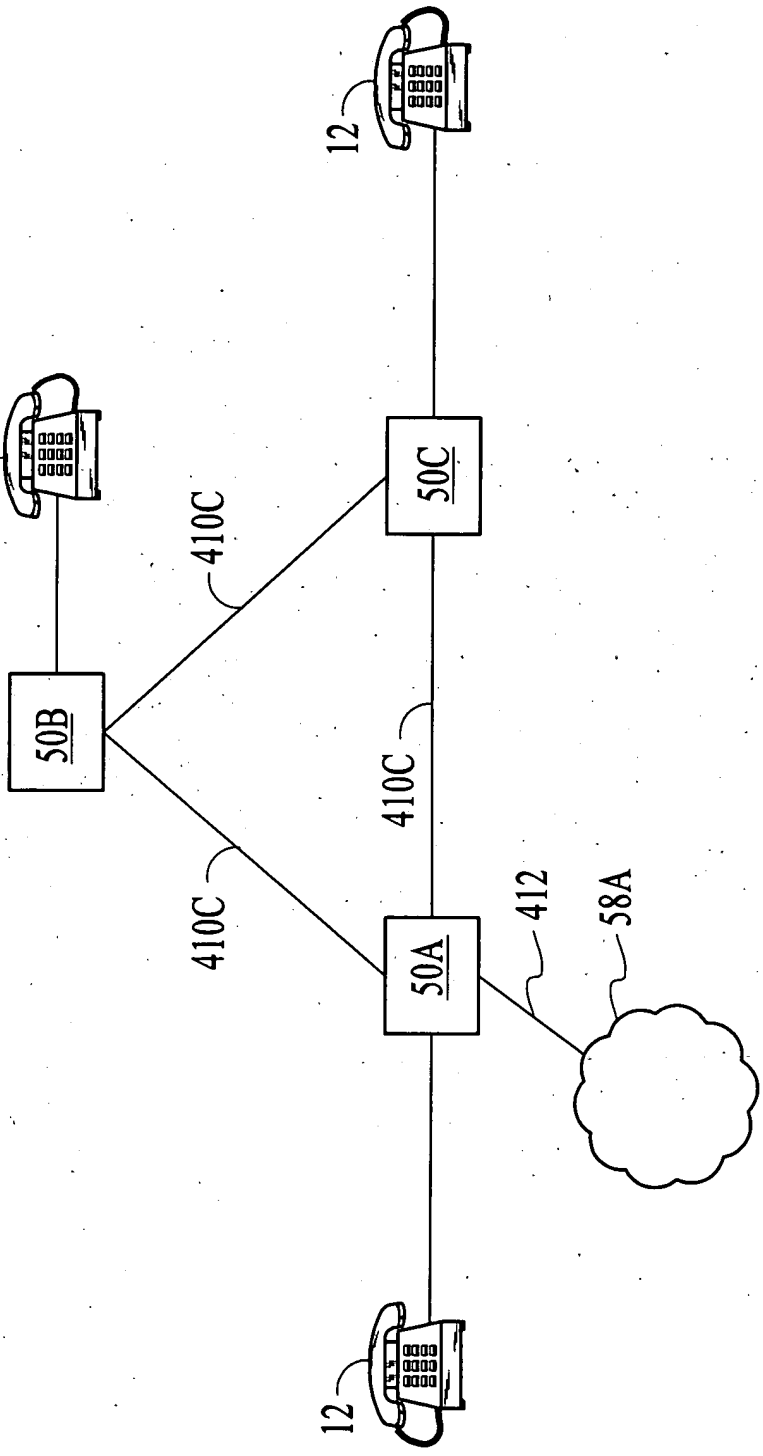


FIG. 19

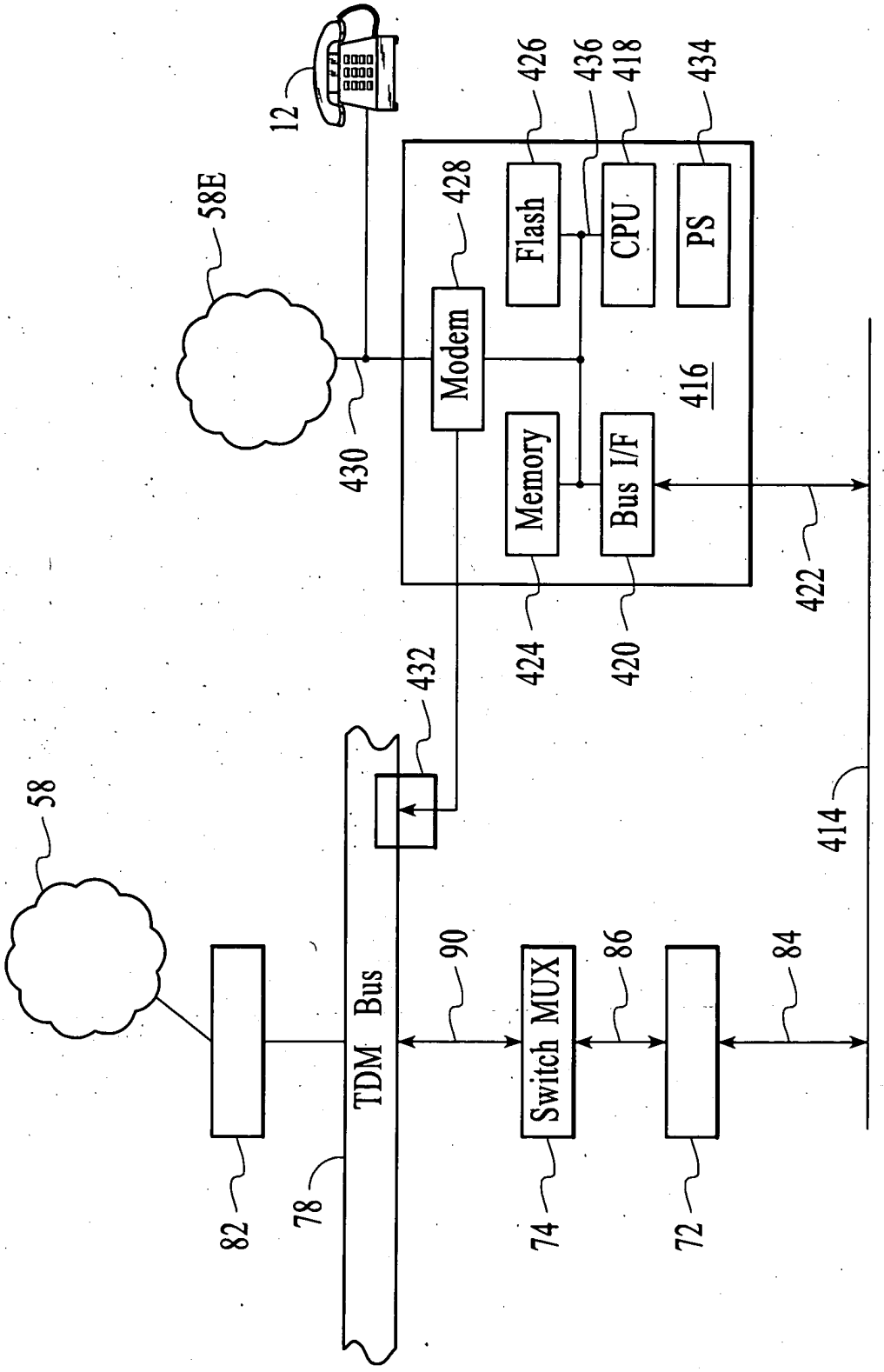

12
426
436
418
434
58E
428
Flash
CPU
PS
Modem
416
430
Memory
Bus I/F
422
424
420
432
58
414
90
86
84
TDM Bus
Switch MUX
82
78
74
72

FIG. 20

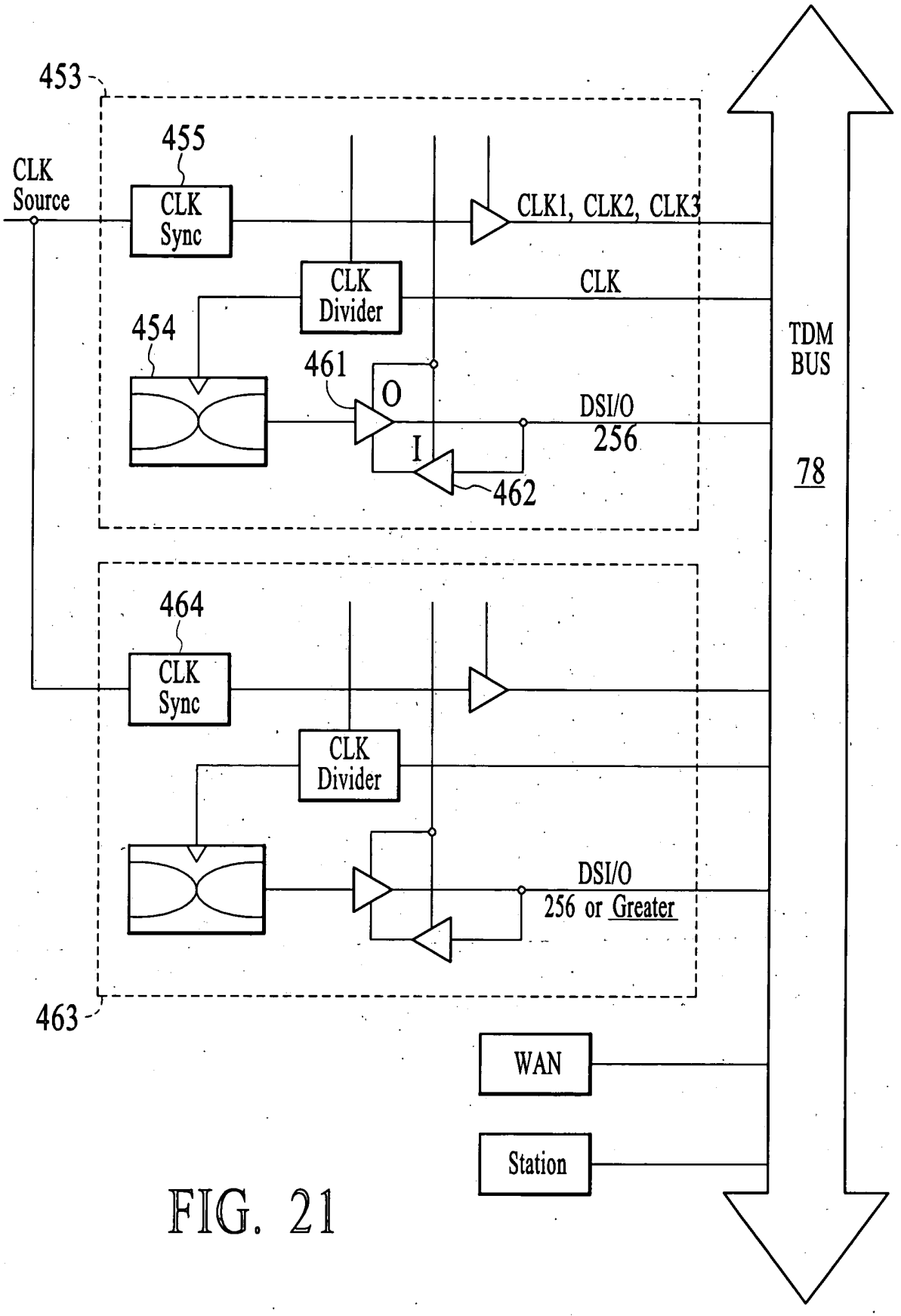

453
455
CLK Source
CLK Sync
CLK1, CLK2, CLK3
CLK Divider
CLK
454
461
O
I
DSI/O 256
462
TDM BUS
78
464
CLK Sync
CLK Divider
DSI/O 256 or Greater
463
WAN
Station

FIG. 21

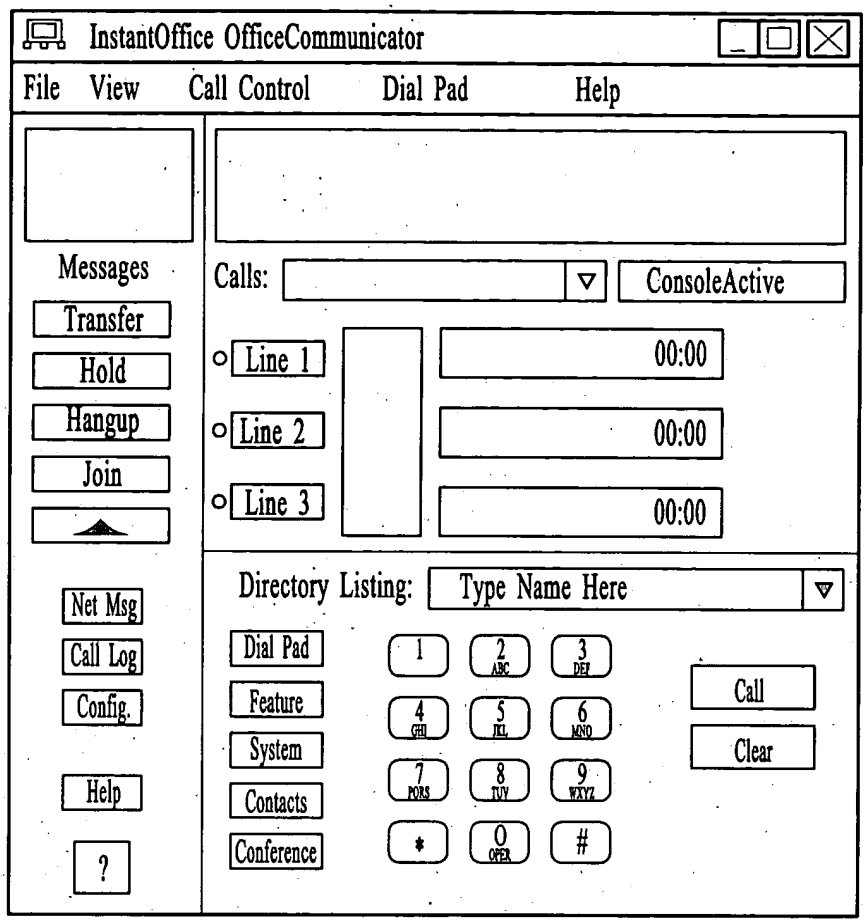

InstantOffice OfficeCommunicator
File
View
Call Control
Dial Pad
Help
Messages
Transfer
Hold
Hangup
Join
Net Msg
Call Log
Config.
Help
?
Calls:
ConsoleActive
Line 1
Line 2
Line 3
00:00
00:00
00:00
Directory Listing:
Type Name Here
Dial Pad
Feature
System
Contacts
Conference
1
2 ABC
3 DEF
4 GHI
5 JKL
6 MNO
7 PQRS
8 TUV
9 WXYZ
*
0 OPER
#
Call
Clear

FIG. 22

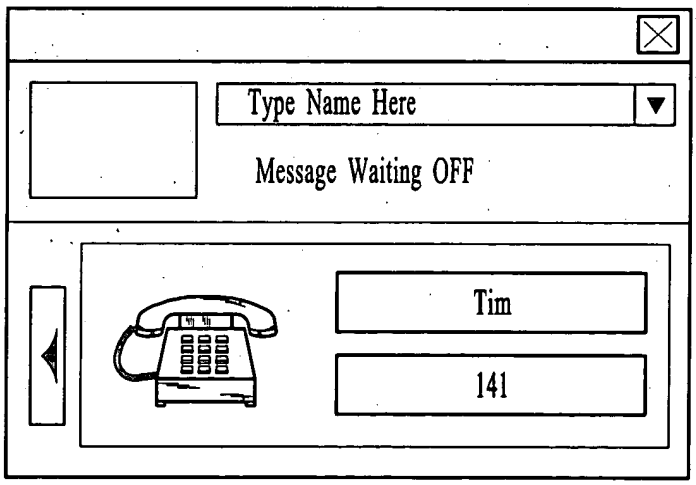

Type Name Here
Message Waiting OFF
Tim
141

FIG. 23

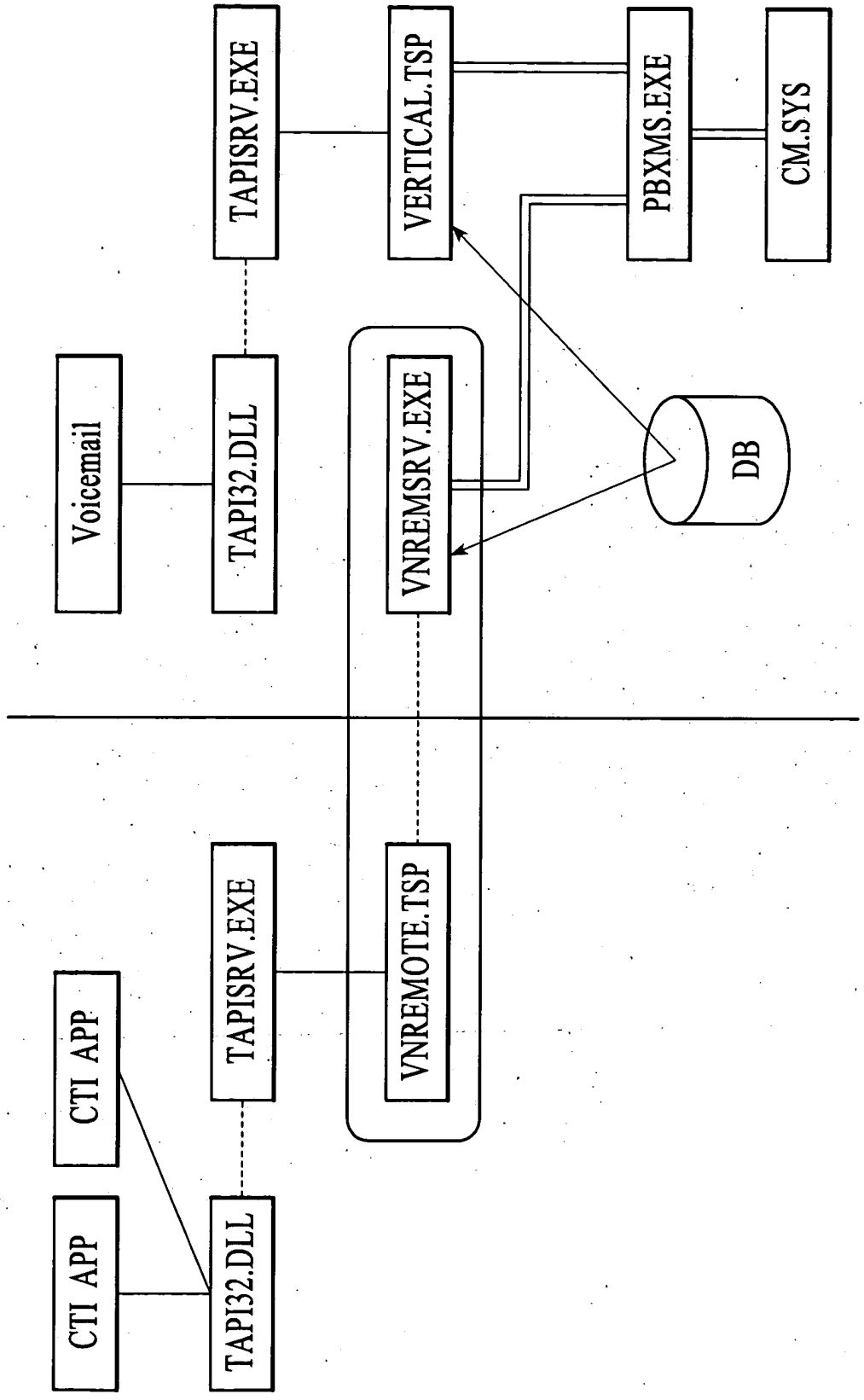

TAPISRV.EXE
VERTICAL.TSP
PBXMS.EXE
CM.SYS
Voicemail
TAPI32.DLL
VNREMSRV.EXE
DB
CTI APP
TAPISRV.EXE
VNREMOTE.TSP
CTI APP
TAPI32.DLL

FIG. 24

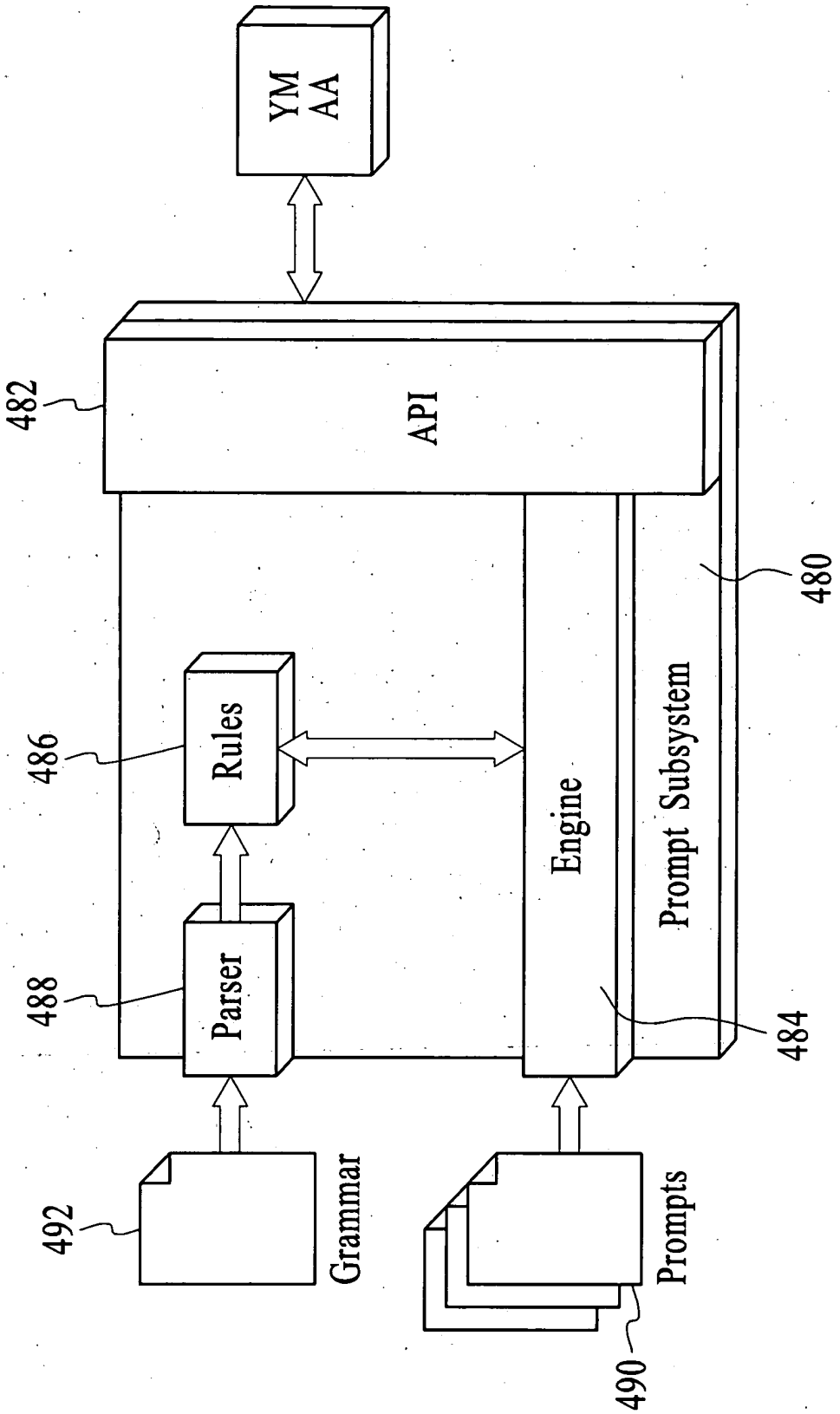

YM
AA
482
API
480
Prompt Subsystem
Engine
486
Rules
488
Parser
484
492
Grammar
490
Prompts

FIG. 25

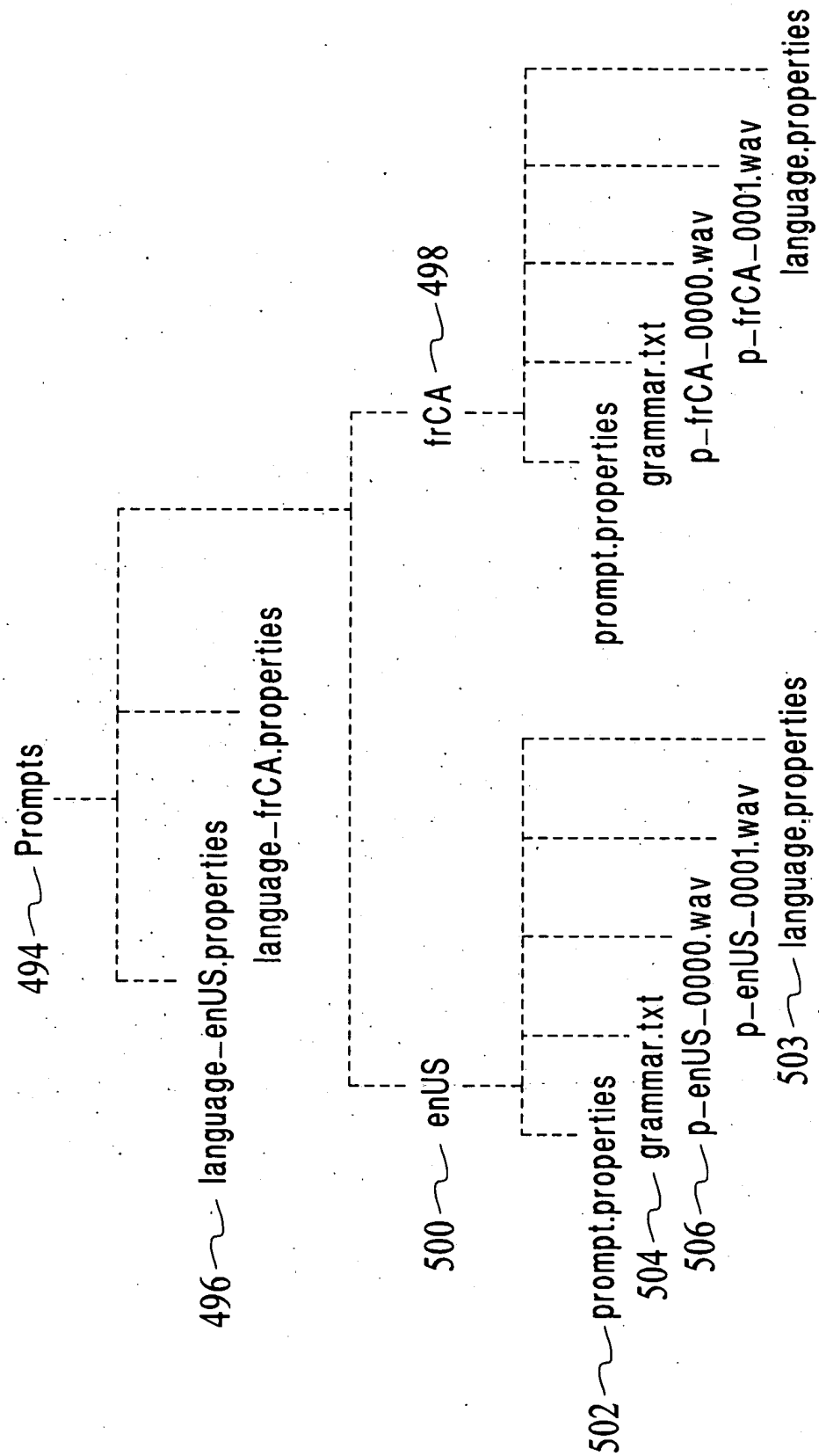

494 Prompts
496 language_enUS.properties
language_frCA.properties
500 enUS
502 prompt.properties
504 grammar.txt
506 p_enUS_0000.wav
p_enUS_0001.wav
503 language.properties
frCA 498
prompt.properties
grammar.txt
p_frCA_0000.wav
p_frCA_0001.wav
language.properties

FIG. 26

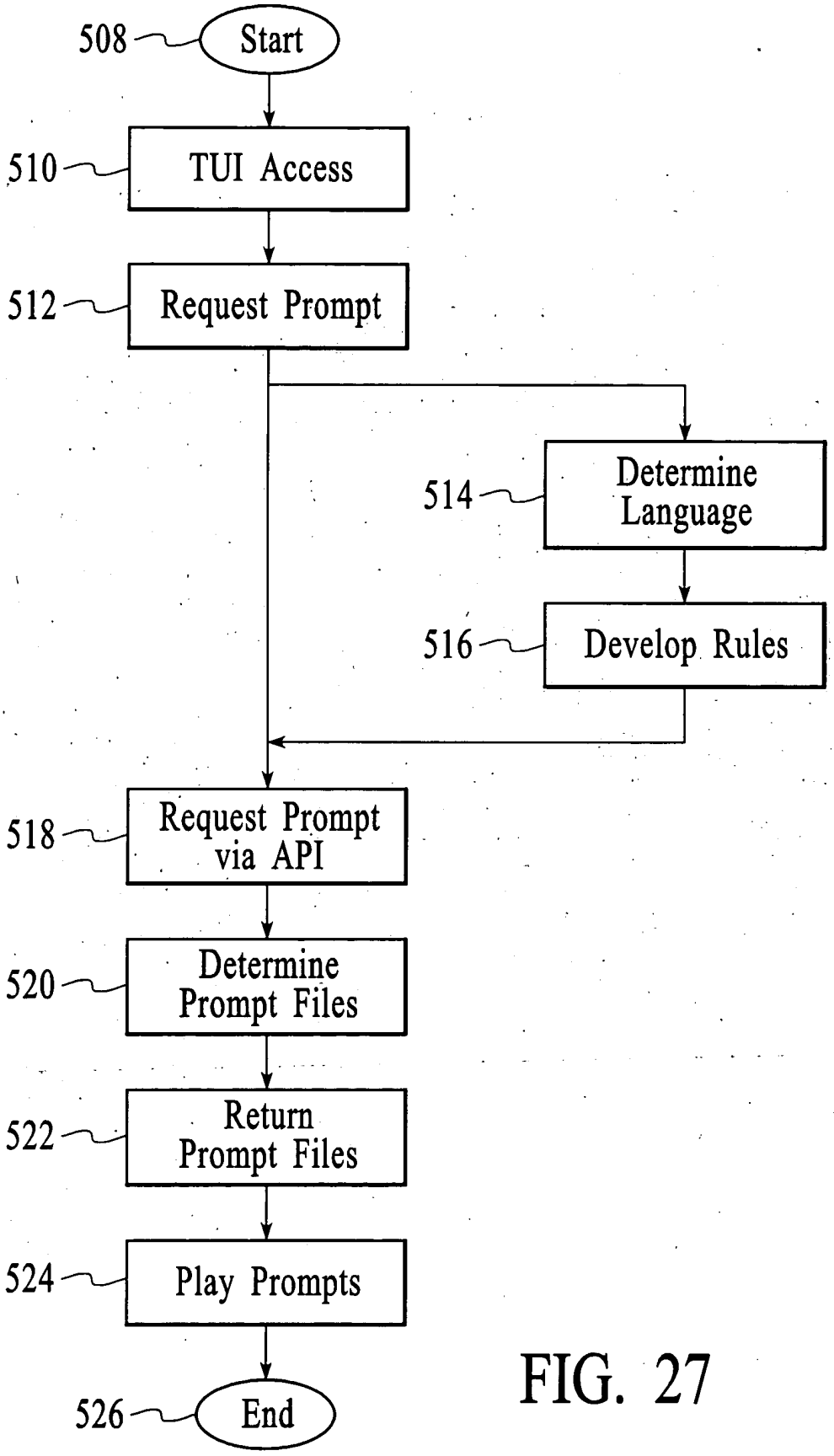

508
Start
510
TUI Access
512
Request Prompt
514
Determine Language
516
Develop Rules
518
Request Prompt via API
520
Determine Prompt Files
522
Return Prompt Files
524
Play Prompts
526
End

FIG. 27